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المراجعة رقم (1)

الترم الاول



Revision on Concept 1.1

Plant Needs

1 Definitions

Photosynthesis

It is the process through which the plant makes its own food inside its leaves by using the light energy from the sun.

Germination

It is a process in which the plant sprouts and begins to grow from a seed.

Plant reproduction

It is the process of making new plants.

Seed dispersal

It is the transportation of the seeds from one place to another.

Basic needs

They are natural resources that living organisms need to survive.

The sun

The main source of energy for all living organisms.

Glucose

It is the food of the plant that provides it with energy to grow and survive.

Flowers

They are the reproductive parts of many plants.

Stomata

They are pores (tiny openings) on the surface of plant's leaves that allow gases to move into and out of the plant.

2 Importance

Roots

- They absorb (draw) water and nutrients from the soil.
- They fix (anchor) the plant in the soil.

Stem

- It transports water and nutrients from the roots to the leaves.
- It supports the leaves and flowers of the plant.

Leaves

They make the plant's food (glucose) through photosynthesis process.

Flowers

They help the plant reproduce by producing seeds.

Xylem

It consists of small tubes that transport water and nutrients from the roots to the leaves.

Phloem

It consists of small tubes that transport glucose from the leaves to all plant parts.

Root hairs

They increase the amount of water and nutrients that the plant takes in from the soil.

Stomata

They allow gases to move into and out of the plant.

Chlorophyll

- It captures (absorbs) the light energy from the sun.
- It gives the leaves their green color.

Plant transport system

It is the system of vessels (tubes) that transport water, nutrients, and the plant's food between the plant's parts.

Human circulatory system

It is the system that transports oxygen and nutrients through blood to all body parts.

Heart

It pumps the blood to all body parts.

Arteries

They carry the blood rich in oxygen and nutrients (glucose) from the heart to all the body cells, so the body survives.

Veins

They return the blood that carries carbon dioxide and a small amount of oxygen and nutrients from the body cells to the heart.

Blood capillaries

They are tiny blood vessels that connect arteries to veins.

3 Give a reason for:

- ① Food is very important for humans and animals.
 - Because food provides them with the energy needed to grow and survive.
- ② Photosynthesis process is important for plants to survive.
 - Because it helps the plant to make its own food.
- ③ Green plants can make its own food.
 - Because they can make photosynthesis process.
- ④ Life on Earth without plants would be impossible.
 - Because plants produce oxygen gas during photosynthesis that is important for animals and humans to breathe.
- ⑤ Sunlight is a basic need for plant to survive.
 - Because plants use sunlight during photosynthesis process to make its own food.
- ⑥ Roots have important role in photosynthesis process of plants.
 - Because they absorb water and nutrients from the soil.
- ⑦ Plants' roots have structures like hairs.
 - Because they increase the amount of water and nutrients absorbed by plants' roots.
- ⑧ Xylem vessels are important for plants.
 - Because they transport water and nutrients from the roots to the leaves.
- ⑨ Phloem vessels are important for plants.
 - Because they transport glucose from the leaves to all plant parts.
- ⑩ Xylem is one-way vessel.
 - Because xylem carry water in one direction from roots to leaves.

- ⑪ The leaves is very important for plant.
 - Because leaves makes the plant's food during photosynthesis.
- ⑫ Chlorophyll has an important role in the photosynthesis process.
 - Because chlorophyll absorbs the energy of sunlight to make the plant's food during the photosynthesis process.
- ⑬ The presence of stomata on the surface of the plant's leaves.
 - To allow gases to move into and out the plant.
- ⑭ Flowers are very important for plants' survival.
 - Because they produce seeds that help the plant to reproduce.
- ⑮ A farmer found seeds that are not from the seeds of his farm.
 - Because seeds are dispersed from one place to another in many ways.
- ⑯ Burdock seeds can stick on animal fur and human cloth.
 - Because their seeds are spiny.
- ⑰ Seeds of dandelion or maple can disperse through the wind.
 - Because their seeds are small and light.
- ⑱ Seeds are dispersed in many ways.
 - Because the way of seed dispersal depends on the size and the shape of seeds.

4 What happens if:

- ① Plants can't get water from the soil?
 - Plants can't make their own food through the photosynthesis process.
- ② Plants can't get carbon dioxide gas from air?
 - Plants can't make their own food through the photosynthesis process.
- ③ We put a seed of bean in wet soil for many days?
 - Seed germinates and grows well.
- ④ A plant is placed in a dark place for few days?
 - Plant's leaves become weak and pale green.
- ⑤ A plant is placed in a dark place for many days?
 - The plant can't make photosynthesis process so it dies.
- ⑥ The plant doesn't have roots?
 - Plants can't absorb water and nutrients from the soil.

⑦ The plant doesn't have stem?

- Water and nutrients can not be carried from the roots to the leaves.

⑧ The leaves of a plant are removed?

- Plant can't make its own food through the photosynthesis process so it can't survive.

⑨ Plants' leaves don't contain chlorophyll?

- Plants' leaves can't absorb the sunlight and can't make the photosynthesis process.

⑩ The stomata on plants' leaves are closed for a long time?

- Gases can't move into or out of the plants' leaves.

⑪ We remove the flowers of a plant?

- Plant can't reproduce and can't produce seeds.

⑫ The plant transport system consists of xylem tubes only?

- The sugar produced in a plant's leaves won't be transported to the other parts of the plant.

⑬ The seeds of the dandelion were heavy?

- Dandelion seeds wouldn't be dispersed by wind.

⑭ There are no spines on burdock's seeds?

- Burdock seeds won't stick on animals' fur or humans' clothes, so they won't be dispersed.

5 Comparisons

Xylem	Phloem
It consists of small vessels that transport water and nutrients from roots to leaves .	It consists of small vessels that transport glucose sugar from leaves to other plant parts .

Arteries	Veins	Blood capillaries
They carry the blood rich in oxygen and nutrients from the heart to all the body cells.	They return the blood that carries carbon dioxide and waste from the body cells to the heart.	They connect arteries to veins.

6 Summary

P.O.C	Plants	Humans and Animals
Similarities	• All living organisms need water and air .	
Differences	They are different in: • Structure • Some needs • The way of getting food and gases.	
Basic Needs (To survive)	• Air • Water • Sunlight • Nutrients	• Air • Water • Food • Shelter
Way of Getting Energy	Plants can make their own food (glucose) inside their leaves through the photosynthesis process.	They must eat food because they can't make their own food.
Way of Getting Gases	Gases enter plants through the stomata in the leaves.	Air enters the human body through the mouth and nose , then travels to the lungs .

Some Concepts About Plant's Needs

Sunlight



1 A plant placed in the sunlight.

- It grows **strong** and **healthy**.
- It grows with a **tall** stem.
- It has **more dark** green leaves.



2 A plant placed in a dark room.

- It grows **weak** and **unhealthy**.
- It grows with a **short** stem.
- It has **less pale** green leaves.

Soil



- Soil is not a basic needs of a plant.
- Plants can grow without soil for a while if they have water and sunlight, but finally they need soil.

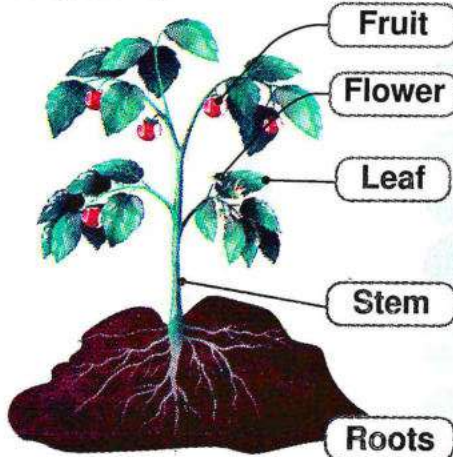
A plant can grow in a **wet paper towel**.

- The initial growth of the seeds in the wet paper towel and soil is **similar**.
- The seeds planted in wet paper towels grow **slower than** those planted in the soil.



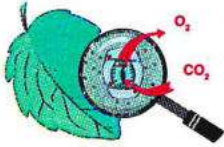
Plant Structure

- All structures inside the plant help it **survive** and **grow**.
- A green plant consists of **roots**, **stem**, **leaves**, and sometimes **fruits** and **flowers**.

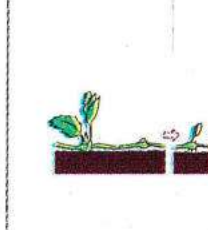


- It helps the plant reproduce by producing seeds.
- It helps in making the plant's food (glucose) through the photosynthesis process.
- It supports the plant parts.
- It carries water and nutrients from the roots to the leaves through the xylem.
- They absorb water and nutrients from the soil.
- They fix (anchor) the plant in the soil.

Other Small Structures Inside the Plant

Root hairs (extend from the roots)		• They increase the amount of water and nutrients absorbed from the soil.
Xylem (inside stem)		• A set of small vessels that transfer water and nutrients from the roots to the leaves .
Phloem (inside stem)		• It transfers food (glucose sugar) from the plant's leaves to other plant's parts .
Chlorophyll (inside the leaf)		• It captures light energy from the sun. • It gives the leaves their green color.
Stomata (inside the leaf)		• They are pores on the plant's leaves that allow air to move into or out of the plant.

Types of Stems

1 Wood Stem	2 Upright Stem	3 Climb Stem	4 Tuber Stem (Extend underground)	5 Runner Stem Extend above ground and helps form new plants.
				
Tree trunks and shrubs	Most flowers	Vine (grapes)	Potato plant	Strawberries

Types of Leaves

1 Narrow Leaves (Look like needles) (Such as pine trees)	2 Flat and Wide Leaves (such as banana leaves)
	

Flowers

- Flowers are the **reproductive parts** of a plant, as they help the plant **reproduce** by **producing seeds**.
- Flowers on plants have different **shapes**, **sizes**, and **colors**.
- Some plants have very small flowers that are hardly seen, such as **grass**.
- Sunflowers** have small, dark-colored seeds in the center of the flower.



Ways of Seed Dispersal

Seed dispersal It is the transportation of the seeds from one place to another.

- The way of seed dispersal depends on the **shape** and the **size** of the seeds.

1 Floating on water surface.

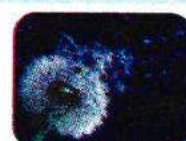


Coconut Seeds

2 Travelling by wind (light seed).



Maple Seeds



Dandelion Seeds

3 Sticking on animals' fur or on human clothing.



Burdock seeds
(have spines).

4 Eaten by animals and come out with their stool.



Tomato Seeds



Apple Seeds

Photosynthesis

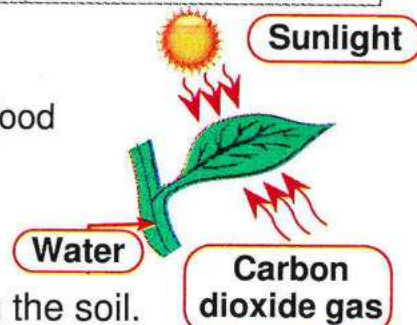
It is the process through which the plant makes its own food inside its leaves by using the light energy from the sun.

Steps:

- The **plant's roots** absorb water and nutrients from the soil.
- The **xylem** transports water and nutrients from the roots to the leaves.
- The **chlorophyll** captures the light energy from the sun.
- The **stomata** allow air to enter the plant's leaf.
- In the presence of sunlight, water combines with carbon dioxide gas to make a type of sugar called **glucose**.
- The **phloem** transports the glucose from the leaves to the other parts of the plant.
- The plant releases **oxygen** and **water vapor** in the air.

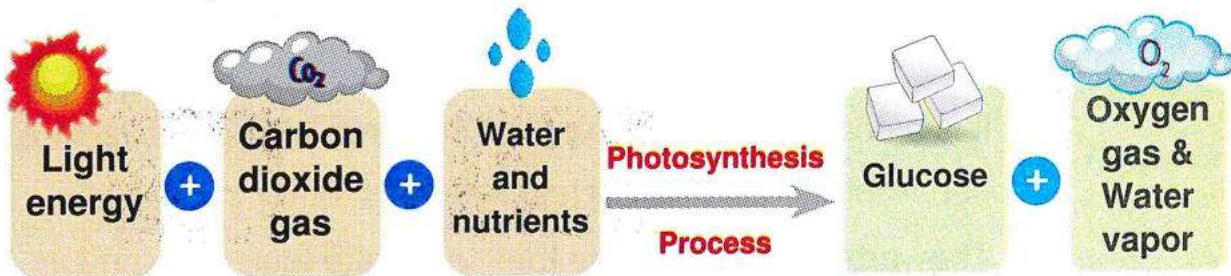
Energy Transformation

- Light energy absorbed from sunlight is converted into chemical energy stored in glucose during the photosynthesis process.



Products of Photosynthesis:

- 1 Glucose as a source of energy for plants.
- 2 Plants release oxygen gas and water vapor into the air.



Comparing Plants and Humans Transport Systems

P.O.C	Humans Circulatory System	Plants Transport System
Drawing		
Structure	1 Heart. 2 Blood vessels. A Veins. B Arteries. B Blood capillaries. 3 Blood.	1 Xylem. 2 Phloem.
Similarities	1 They are similar in function. They transport nutrients and gases to all parts of the living organism's body. 2 Both have one-way vessels.	

Revision on Concept 1.2

Energy Flow in Ecosystems

1 Definitions

Ecosystem

It is a community (an area) that contains living organisms and non-living things that interact with each other.

Producers

They are living organisms that can make their own food in the presence of sunlight.

Consumers

They are living organisms that eat other living organisms to get energy because they can't make their own food.

Decomposers

They are living organisms that carry out the decomposition process by breaking down or decaying dead organisms.

Primary consumers

They are animals that eat producers and they are known by Herbivores.

Secondary consumers

They are animals that eat primary consumers.

Tertiary consumers

They are animals that eat secondary consumers.

Predator

It is the animal that hunts (eats) another animal.

Prey

It is the animal that is hunted (eaten) by another animal.

Energy

It transfers between animals in a food web to help them survive.

Food chain

A model that shows a linear set of feeding relationships and the flow of energy among living organisms.

Food web

A model that shows several interconnected food chains among living organisms.

2 Importance

Ecosystem	It provides living organisms with food, water, and shelter.
Glucose	It provides plants with energy to grow and survive.
Decomposers	- They recycle nutrients back into the ecosystem through the decomposition process. - They increase soil fertility that is important for plant growth.

3 Give a reason for:

- ① Animals eat plants or other animals.
 - To get the energy, because they can't make their own food.
- ② Hawks depend on plants to get their energy.
 - Because hawks eat animals that eat plants.
- ③ The sun is very important for all living organisms on Earth.
 - Because the sun is the main source of energy for all living organisms.
- ④ Green plants are considered as producer organisms.
 - Because they can make their own food through the photosynthesis process.
- ⑤ Food is very important for humans.
 - Because food provides the human body with the needed energy to grow, survive and do all vital activities.
- ⑥ Decomposers are very important for an ecosystem.
 - Because they return nutrients of dead organisms back to the soil.
- ⑦ Snakes are considered as consumers.
 - Because they can't make their own food, so they eat other animals to get energy.
- ⑧ Soil fertility depends on decomposers.
 - Because they return nutrients to the ecosystem by decomposing dead organisms' bodies that increase the soil fertility.
- ⑨ Sticky seeds can be dispersed by humans or animals.
 - Because sticky seeds can be dispersed by sticking to humans' clothes or animals fur.

4 What happens if:

- ① A hawk is placed in an ecosystem that contains plants only?
 - The hawk moves to another ecosystem to search for food or it dies.
- ② There is no sunlight reaches the Earth's surface?
 - The plants cannot make their food so they will die.
- ③ All primary consumers disappear from a certain food chain?
 - All secondary consumers will die or move to another ecosystem.
- ④ The decomposers disappear from an ecosystem?
 - Dead organisms will not be decomposed and their nutrients will not return back to the soil.

5 Comparisons

Producers	Consumers	Decomposers
They are living organisms that can make their own food in the presence of sunlight.	They are living organisms that eat other living organisms to get energy.	They are living organisms that breaks down or decaying dead organisms.

Primary Consumers	Secondary Consumers	Tertiary Consumers
They are animals that eat producers.	They are animals that eat primary consumers.	They are animals that eat secondary consumers.

Food chain	Food web
A model that shows a linear set of feeding relationships and the flow of energy among living organisms.	A model that shows several interconnected food chains among living organisms.

6 Summary

Ecosystem It is a community (an area) that contains **living organisms** and **nonliving things** that interact with each other.

Ecosystem Components

Living Organisms	Biotic Factor	• Humans. • Animals. • Plants.
Nonliving Things	A biotic Factor	• Air. • Soil. • Water.

Ecosystem examples:



- Ecosystems provide living organisms with **food** and **shelter** to survive.
- Energy moves between animals when they feed on each other.
- When living organisms die, their bodies decompose.
- Animals don't choose their food, but they eat what their bodies need.

Rabbits eat grass.	Caracals eat mice and rabbits.	Birds eat worms.
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- Hawks are **meat-eating animals**.
- Hawks eat **snakes, mice, fish, birds, squirrels, rabbits,** and other **small ground animals**.
- Hawks don't eat plants, but they eat animals that eat plants. So, they also depend on plants to get their needed energy.
- Hawks are attacked by a few predators, such as **eagles** and **other hawks**.
- When hawks die, **decomposers** return their energy to the soil.



Energy Transfer in Ecosystems

- The sun is the primary (main) source of energy for all living organisms.
- Green plants are producers, while animals and humans are consumers.

1 Producers (The first link in any food chain)

- They are living organisms that can make their own food in the presence of sunlight through photosynthesis process.
- **Example:** Green plants

2 Consumers

- They are living organisms that feed on other organisms to get energy.

a Primary consumers: (The second link in a food chain)

They are living organisms that eat producers.

Examples: insects, mice and rabbits.

b Secondary consumers:

They are living organisms that eat primary consumers.

Examples: birds and frogs.

c Tertiary consumers: (The third link in a food chain)

They are living organisms that eat secondary consumers.

Examples: alligators, lions and sharks.

3 Decomposers (The final link in any food chain)

- They are living organisms that carry out the decomposition process by decaying dead organisms.
- **Importance:**
 - 1 They recycle nutrients back into the ecosystem.
 - 2 They increase the soil's fertility.
- **Examples of decomposers:**

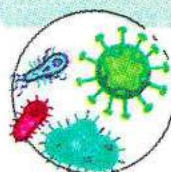
Fungi



Earthworms



Bacteria



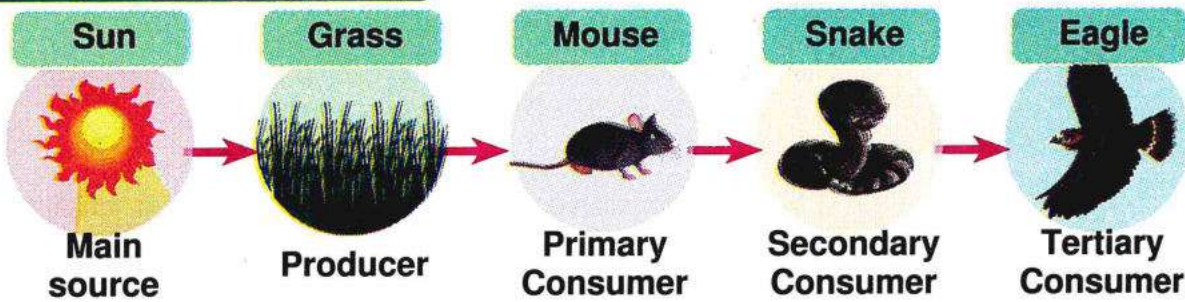
Millipedes



Food Chain

It is a model that shows a linear set of feeding relationships and the flow of energy among living organisms.

Example of a food chain:



- The energy from the **sun** passes to the **grass**, then to the **mouse**, then to the **snake**, then to the **eagle**.

Predator

It's the animal that eats (hunts) another animal.



Prey

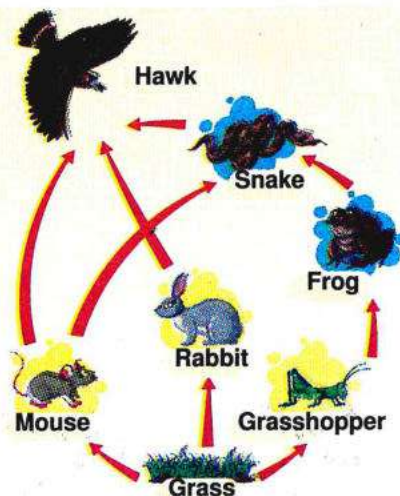
It's the animal that is eaten (hunted) by another animal.



Food web

It is a model that shows several interconnected food chains among living organisms.

- A food web is made up of several interconnected food chains.
- The food web is better than the food chain in showing the interaction among organisms many living organisms that share the same food resources.



Dr. Becky Barak



Job

- **Plant community ecologist**

(It means she studies groups of plants.)

Where does she work?

- She does her researches in **natural areas (prairie)**, where plants and animals exist.

Studies

- She learned about **ecology**.
- She studied **restoration ecology**.

(Restoration ecology means repairing damaged habitats.)

Seed Dispersal

1 Sticky Seeds

Their seeds can stick to

Human clothes

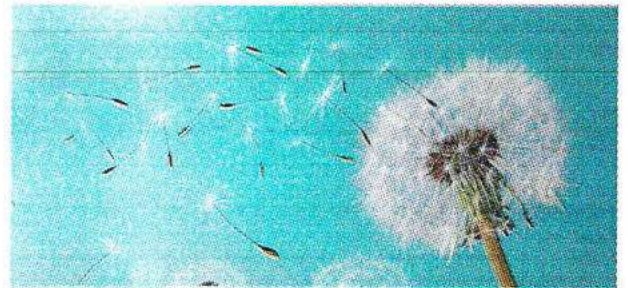


Animals fur



2 Light (Flying) Seeds

They are dispersed by the wind.



Revision on Concept 1.3

Changes in Food Webs

1 Definitions

Top predators	They are consumers that exist at the top of the food chains.
Population	It is the number of organisms of one type of species living in an area.
Population change	It is the increase or decrease in the number of one type of species in an area.
Microorganisms	- They are tiny living organisms that can't be seen by the naked eye. - They are the producers that can only survive in cold water habitat.
Coral reefs	They are the most diverse and valuable marine ecosystems on Earth.
Microplastics	They're small pieces of plastic (smaller than a grain of rice) that are formed due to the effect of the sun.
Habitat restoration	A process of returning a habitat to its natural state before the harm was done.
Nursery	An area in the ocean, where scientists take care of small pieces of coral.
Zero plastics	A way of life adopted in Egypt, in coastal communities near coral reefs by limiting the use of single-use plastic products.

2 Importance

Coral reefs	They provide many marine organisms with food and shelter.
Habitat restoration	- It works on repairing all parts of the habitat. - It works on restoring the food and water resources
Nursery	An area in the ocean, where scientists take care of small pieces of coral.

3 Give a reason for:

- ① If the number of one species in an ecosystem increases, they all die.
 - Because the food resources will run out (disappear).
- ② Algae are considered producers.
 - Because algae can make their own food through the photosynthesis process.
- ③ Gentle rain benefits the desert ecosystem.
 - Because rain water helps producers to grow then consumers feed on producers.
- ④ Heavy rain harms the desert ecosystem.
 - Because it causes flooding and death of producers so consumers will move to new ecosystem or die.
- ⑤ Microorganisms are very important in the marine ecosystem.
 - Because they are the source of food for many small fish.
- ⑥ Seabirds build their nests on mountains near a cold water habitat.
 - Because they feed on small fish that feed on microorganisms that live in cold water habitat.
- ⑦ Sharks may move away to another ecosystem due to death of algae.
 - Because sharks feed on many marine organisms that feed on algae.
- ⑧ Plastic is very harmful to marine organisms.
 - Because plastics are sharp and toxic.
- ⑨ Coral bleaching occurs when the water temperature rises.
 - Because coral reefs get rid of algae living in their tissues.

⑩ Habitat loss occurs for many living organisms.

- Due to human activities such as adding buildings and roads, overfishing, and throwing waste in water.

⑪ The restoration process has positive effects on ecosystems.

- Because it prevents species from extinction by restoring shelters and food and water resources.

⑫ The nursery plays an important role in protecting corals from bleaching.

- Because in nursery, scientists take care of small pieces of coral until they grow up.

4 What happens:

① To the food resources if the number of one species increases in an ecosystem?

- The food resources decrease or they may run out.

② To the sharks if all algae disappear from a certain marine food web?

- Sharks will move another ecosystem or die.

③ To the grass amount in a desert that is exposed to drought for a long time?

- Grass dies.

④ To the number of secondary consumers if the number of primary consumers decreases in an ecosystem?

- The number of secondary consumers decreases.

⑤ If the climate change is unsuitable for a population of one type of species?

- The population of this species decreases.

⑥ To microorganisms if the seawater becomes warm?

- Microorganisms move to another cooler water habitat.

⑦ To coral reefs when the seawater temperature rises?

- They get rid of algae living in their tissue, so coral bleaching occurs.

⑧ If a habitat is not restored before damage is done?

- Many species in this habitat may be lost or extinct.

⑨ To a small lake if it is exposed to extreme hot weather?

- The lake may disappear completely due to evaporation of water.

⑩ If people throw big amount of plastic garbage in water?

- The water will be polluted which harm marine organisms.

5 Summary

The energy in an ecosystem remains as it is.

- Some of the energy transfers among living organisms when they feed on each other.
- Most of the energy is recycled back to the ecosystem by **decomposers**.

In any ecosystem:

If producers disappear,

- primary consumers will die quickly.
- secondary consumers will move to another habitat or they will die.

If the number of one species of organisms increases too much,

- the food resources will **run out**.

If there are many top predators in the food web,

- the number of other consumers will decrease.

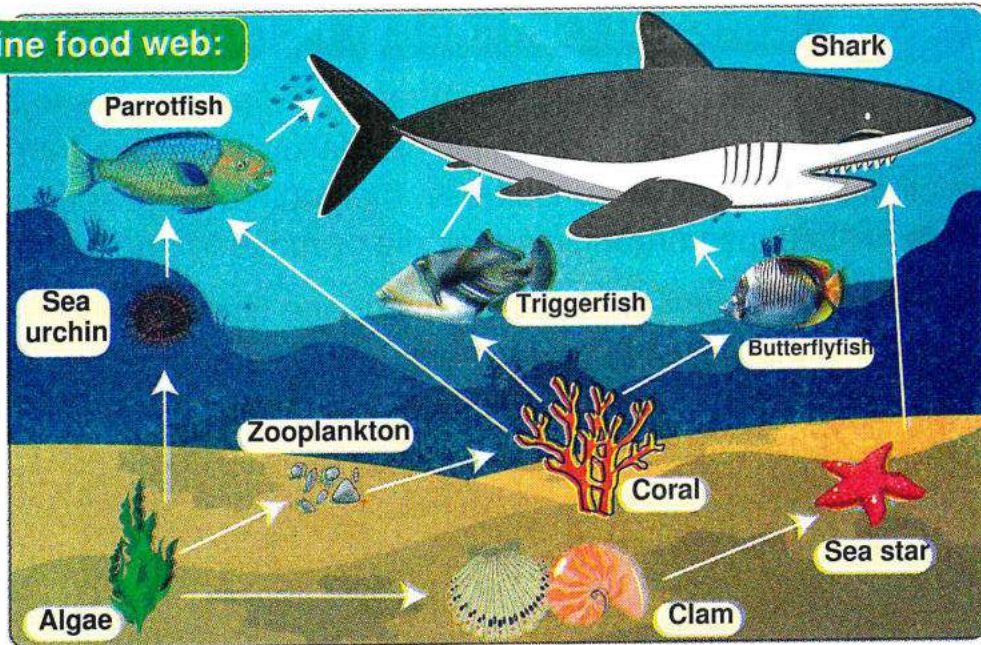
In the desert ecosystem

If there is ..	Result	Reason
Gentle Rain	• The desert ecosystem might be improved.	• Rainwater helps producers grow. • Consumers feed on producers.
Heavy Rain	• The desert ecosystem might be harmed.	• Heavy rain leads to floods, which destroy the ecosystem.
Drought	• The desert ecosystem might collapse.	• Producers die. • Consumers move to another habitat or they die.

In the marine ecosystem

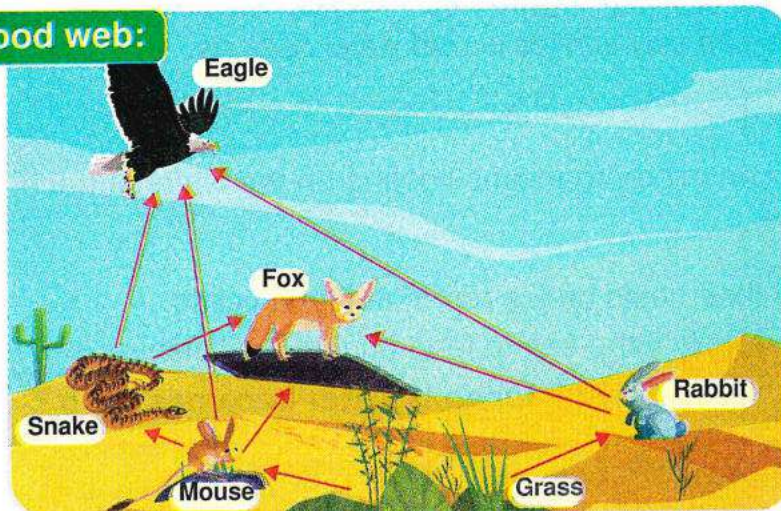
Overfishing	• A human activity that leads to a decrease in the number of fish.
Water Pollution	• A human activity in which humans throw waste materials into the water in rivers, seas, and oceans. • Water pollution: It is the harm that happens to water by substances that harm living organisms.

In the marine food web:



- **Algae** is producers that produces its own food.
- **Zooplankton**, **clams**, and **sea urchins** are primary consumers.
- The **sea star** feeds on the clam and is eaten by sharks.
- The **parrotfish** feeds on sea urchins or corals.
- **Butterflyfish** and **triggerfish** feed on corals.
- The **shark** is a top predator that eats butterflyfish, parrotfish, triggerfish, and sea stars.

In the desert food web:



- **Grass** is the producer that produces their own food.
- **Rabbits** and **mice** are primary consumers that feed on producers.
- **Hawks** and **foxes** are top predators.

Effect of Climate on Population

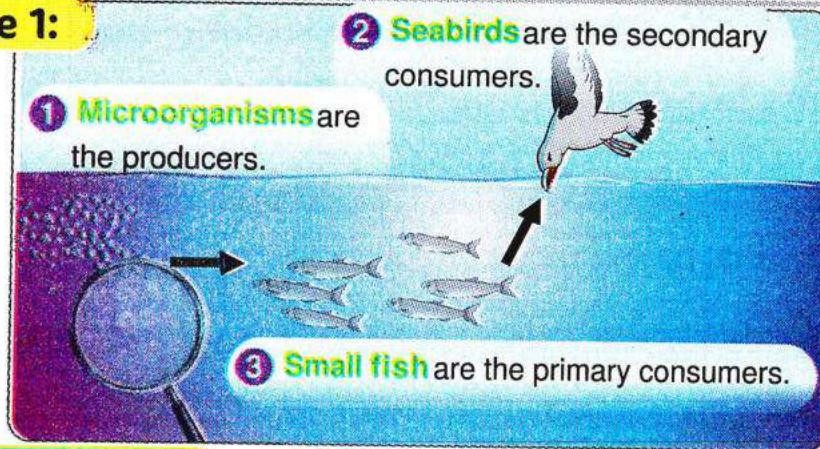
The climate changes affect the population of species, as follows:

- ① If the climate changes are suitable, the population of species **increases**.
- ② If the climate changes are unsuitable, the population of species **decreases** because organisms may die or move to another ecosystem.

Population It is the number of organisms of one type of species in an area.

Population Change It is the increase or decrease in the number of one species in any area.

Example 1:



① Microorganisms

- Microorganisms are the producers because they can make their own food.
- Microorganisms are tiny organisms that cannot be seen by the naked eye.
- Microorganisms can only survive in cold water habitats.

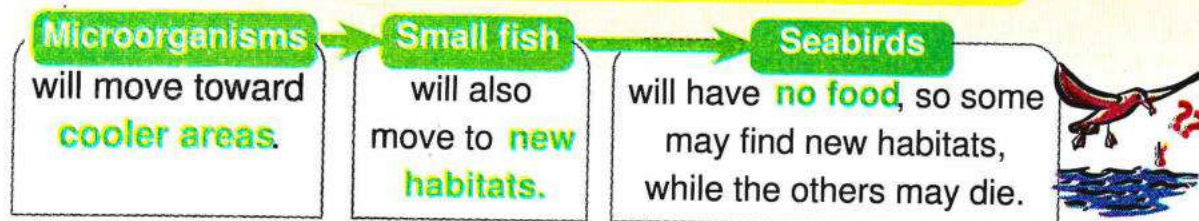
② Small fish

- Small fish feed on microorganisms floating on the water surface.

③ Seabirds

- Seabirds build their nests on the top of mountain cliffs.
- Seabirds dive deeply into the sea to feed on the small fish.

What will happen if water becomes warm?

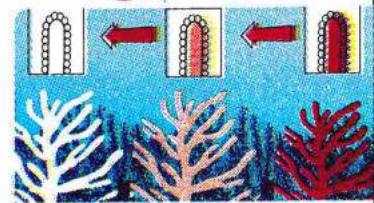


Example 2:

- Coral reefs are from the most diverse and valuable ecosystems on Earth.
- **Importance of coral reefs:**
 - 1 Coral reefs provide **food** and **shelter** for many marine organisms.
 - 2 Coral reefs are also important for tourism.

How does coral bleaching happen ?**When the water becomes too warm:**

- 1 Coral reefs **get rid of the algae** living in their tissues.
- 2 This causes the color of the coral reefs to turn completely **white**.
- 3 Bleaching events stress corals, so they do not survive.

**Effect of Plastic Pollution**

- Plastic is very dangerous because it is **not nutritious** and could be **sharp** or **toxic**.
- Some marine organisms, such as whales, turtles, seabirds, and fish cannot differentiate between real food and a piece of plastic.

Examples:**Turtles**

Turtles eat a lot of plastic, thinking that they are **jellyfish**.

Corals

Corals **filter** the seawater to get their food, so they **ingest** microplastics.

• Microplastics:

- They are small pieces of plastic that are even smaller than a grain of rice.
- They are formed by the effect of **the sun**.

Habitat restoration

It is the process of returning a habitat to its natural state before harm was done.

Example 1:

Coral Reefs Rehabilitation Project in Arabian Gulf

- 1 Scientists harvest small parts of coral species.
- 2 Scientists move them to a "nursery".
- 3 In the nursery, small pieces of corals grow up healthy.
- 4 Scientists return the healthy coral pieces to the reefs where they were dying.
- 5 Healthy corals can continue growing and reproducing to make new coral reefs.



A **nursery** is an area in the sea or ocean where scientists take care of small pieces of coral.

Example 2: Zero plastics

A way adopted by coastal communities in Egypt to decrease plastic pollution by limiting single-use plastic products.

Some ways to reduce plastic pollution:

Using less plastic products.

Stop throwing plastic into the water.

Recycling plastic waste.

People in Palau use conservation programs to protect the marine environment by:

- 1 Controlling the human activities on land by preventing throwing waste materials into the ocean to protect it from pollution.
- 2 Preventing fishers from overfishing in coral reef regions.

Revision on Concept 2.1

Matter in The World Around Us

1 Definitions

Matter	It is anything that has mass and volume (takes up a space).
Volume	It is the amount of space that matter takes up.
Particles	They are the building units of matter.
Model	It is a copy that is similar to a real thing.
Globe	It is a model of the whole Earth in the shape of large ball.
Solar System	It is a very big place that consists of sun and eight planets.

2 Importance

Ruler	It is used to measure the length of some matters such as a length of a book.
Measuring tape (Tape measure)	It is used to measure the length of some matters such as a length of a room.
Balance (scale)	It is used to measure the mass of matter.
Thermometer	It is used to measure the temperature of matter.
Electron microscope	It is used to see one tiny particle, such as one blood cell.
Model	- It is a great way to see many things at the right size. - It helps us understand how things work.

Globe	- It is used to show: 1 The shape of the Earth. 2 How much Earth is covered with oceans. 3 Where different countries are located.
Solar System Model	- It shows us all the planets at once. - It helps us compare between planets according to the size and the location.
Germ model	- A germ model helps us to see: 1 The shape of germs without a microscope. 2 The different parts of germs that help them spread from one person to another.
Model of a volcano	It shows the volcano shape and how ooze liquid comes out during a real eruption.
Model of an airplane	It shows how an airplane flies up in the air.
Ping pong 3D Model	It shows the movement of the particles and the spaces between them.

3 Give a reason for:

- 1 Book is a matter.
 - Because it has mass and volume.
- 2 Wood is a solid matter.
 - Because it has definite shape and volume.
- 3 Oil is a liquid matter.
 - Because it has indefinite shape and definite volume.
- 4 Oxygen is a gas matter.
 - Because it has indefinite shape and volume.

- ⑤ Wood has definite shape and volume.
 - Because it is a solid matter.
- ⑥ Oil has indefinite shape and definite volume.
 - Because it is a liquid matter.
- ⑦ Oxygen has indefinite shape and volume.
 - Because it is a gas matter.
- ⑧ A piece of iron keeps its shape when putting it into different containers.
 - Because iron is a solid matter that has a definite shape.
- ⑨ Liquids take the shape of their containers.
 - Because liquids have indefinite shape, and their particles can slide over each other.
- ⑩ Particles of a piece of iron are very close to each other.
 - Because it is a solid matter.
- ⑪ Particles of water vapor move more freely than those of water.
 - Because particles of water vapor have more spaces between them than particles of water.
- ⑫ Scientists don't use a normal microscope to see tiny particles of matter.
 - Because a normal microscope is not powerful enough.
- ⑬ Sometimes we need to use an electron microscope.
 - To see each tiny particle as it is more powerful than normal microscope.
- ⑭ Using models to study some scientific concepts.
 - To study them in an easier way.
- ⑮ Scientists make model of germs.
 - To show the shape of germ and parts of it without using a microscope.
- ⑯ Using models to study some scientific concepts.
 - To study them in an easier way.
- ⑰ Globe is a useful tool in learning.
 - Because it shows us the shape of Earth, how much it is covered with water and the location of different countries.
- ⑱ Solar system is a useful tool in learning.
 - Because it shows us all planets at once and help us to compare them.

①⑨ The arrangement of particles inside a solid state is different than that in a liquid state.

- Because particles of the solid state are organized in a regular pattern, while liquid particles have a random arrangement.

②⑩ Chef keeps vegetables in the freezer.

- To keep vegetables fresh and ready to be used for a long period of time.

4 What happens:

① To the shape of ice cube if you put it in an empty cup?

- The shape of ice cube doesn't change.

② To the shape of water if we put water in a container?

- Water takes the shape of each container.

③ To the state of water after it is heated in the kettle for few minutes?

- The state of water changes from liquid state into gas state.

④ To the volume of a coin if we move it from a cup to another cup?

- The volume of a coin doesn't change.

⑤ To the volume of water if we put it in new container?

- The volume of water doesn't change.

⑥ To the speed of particles of an ice cube when it is exposed to the sun?

- The particles move faster and spread from each other.

⑦ To the size of a balloon when you blow it up?

- It increases.

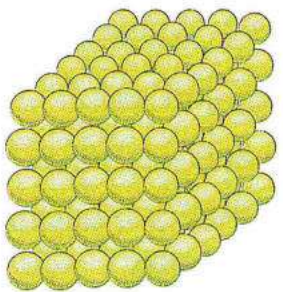
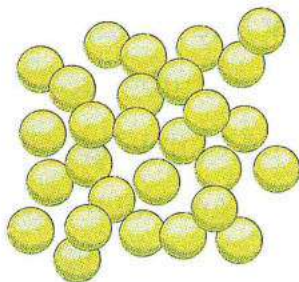
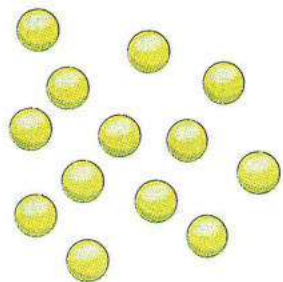
⑧ To the arrangement of particles of water after freezing?

- It is organized.

⑨ To the state of water if we put small amount of it in the freezer for few hours?

- It changes from liquid state to solid state.

5 Comparisons

P.O.C	Solid	Liquid	Gas
Figures			
Shape	Definite. (Fixed.)	Indefinite. (Variable.)	Indefinite. (Variable.)
Volume	Definite. (Fixed.)	Definite. (Fixed.)	Indefinite. (Variable.)
Arrangement of particles	Organized. (Regular pattern.)	Not well organized. (Random arrangement.)	Not organized at all. (Random arrangement.)
Forces between particles	They are held together.	They are held together more loosely.	They are not held together.
Spaces Between Particles	They are very close to each other. (Packed tightly.)	They have more spaces.	They have a lot of spaces.
Energy of Particles	They have less energy.	They have more energy.	They have a lot of energy.
Motion of Particles	They move only a little bit.	They move more freely.	They move very freely.

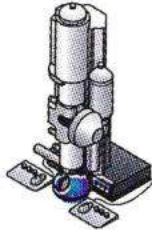
6 Summary

Matter

- **Matter** is anything that has **mass** and **volume** (takes up space).
- Matter can exist in **three** states: **solid**, **liquid**, and **gas**.
- All matters are made up of tiny, identical moving **particles**.
- **Light**, **sound**, and **heat** are not matters, but they are forms of **energy**.

Measuring Tools

Tape Measure	Balance (Scale)	Measuring Cup
		
It is used to measure length .	It is used to measure mass .	It is used to measure volume .

Thermometer	Electron Microscope
	
It is used to measure temperature .	It is used to see individual particles of matter.

States of Matter

P.O.C	Solids 	Liquids 	Gases 
Shape	• Definite (fixed). • Keep their shape.	• Indefinite shape. • Take the shape of the container. • Can be poured.	• Indefinite shape. • Fill their container and take its shape.
Volume	• Definite (fixed).	• Definite (fixed).	• Indefinite.
Spaces between particles	• Very close. • Are held together (packed tightly).	• Have more spaces. • Are held together more loosely.	• Have a lot of spaces. • Are not held together.
Energy of particles	• Less energy.	• More energy.	• A lot of energy.
Motion of particles	• Move only a little bit. (Move around their place.) (Vibrate.)	• Move more freely. • Move faster than solids. • Can slide over each other.	• Move very freely. • Move very quickly.
Arrangement of particles	• Regular (organized). • Packed in a neat, ordered arrangement.	• Have random arrangements. • Are not well organized.	• Have random arrangements. • Are not well organized at all.

Model

It is a copy that is similar to the real thing.

Importance of models:

1 Models are a great way to see many things at the **right size (not the real size)**.

Models represent very big things in a smaller size, such as:	Models represent very tiny things in a bigger size, such as:
Globe model  • It shows us the Earth shape, locations of countries, and the amount of water covering it.	Germs model  • To see the shapes of germs. • To see different parts that help germs spread from one person to another.
The Solar system model  • To compare between planets.	

2 Models can help us understand how things work.

• Volcano model

It shows us shape of volcano and how ooze liquid comes out during a real eruption.

Revision on Concept 2.2

Describing and Measuring Matter

1 Definitions

Physical properties	They are properties of matter that are observed by our five senses or measured using a specific tool without changing the structure of matter.
Chemical properties	They are properties that describe matter according to its ability to change into new matter that has different properties.
Volume	It is the amount of space that matter takes up.
Mass	It is a measurement of the amount of matter.
Temperature	It is a physical property that measures how quickly the particles in a substance are moving.
Conduction	It is the ability of a material to transfer heat and conduct electricity.

2 Importance

Stones	They are used to build the roof of a desert home.
Ceramic tiles (Bricks)	They are used to build the roof of a cold weather home.
Leaves and sticks	They are used to build the roof of a tropical rainforest home.
Ruler	It is used to measure length of some matters such as a length of a book.
Measuring tape (Tape measure)	It is used to measure length of some matters such as a length of a room.

Balance (scale)	It is used to measure the mass of matter.
Thermometer	It is used to measure the temperature of matter.
Measuring cup	It is used to measure the volume of matter.
Hand lens	It is used to examine the shape of crystals of sugar, salt and flour.
Helium gas	It is used to fill balloons and blimps.
Copper	- It is used in making electrical wires. - It is used in making the body of cooking pans.
Plastic (Wood)	- It is used in covering electrical wires. - It is used in making the handles of cooking pans.
Glass	It is used in making windows, eyeglasses and light bulb.
Steel	It is used in making screwdrivers and hammers.
Rubber	It is used in making athletic shoes, gloves and tires.

3 Give a reason for:

- ① The material of roof of houses vary from one environment to another.
 - Because roof materials depend on the climate where the home is built.
- ② The roof of a desert home is made of strong stones.
 - To protect home from dust and dirt.
- ③ The roof of a tropical rainforest home is made of leaves and sticks.
 - To prevent animals from getting inside it.
- ④ The roof of a cold weather home is made of ceramic bricks (tiles).
 - To protect home from snow and rain.
- ⑤ The roof of a cold weather home is slanted (inclined).
 - To allow snow to slide over it.
- ⑥ You can't differentiate between sugar and salt by your sense of sight.
 - Because both have white color.

Final Revision

- ⑦ The ability of iron to rust is considered a chemical change.
 - Because when iron interacts with air, it forms rust (new substance).
- ⑧ The ability of paper to burn is considered a chemical change.
 - Because when paper interacts with fire, it forms ash (new substance).
- ⑨ A wooden cube floats on the water surface.
 - Because the density of wood is less than the density of water.
- ⑩ An iron cube sinks in water.
 - Because the density of iron is more than the density of water.
- ⑪ You can separate a mixture of sand and iron nails by using a magnet.
 - Because iron nails are attracted to magnets, while sand isn't attracted to magnets.
- ⑫ Balloons and blimps, filled with helium gas, rise up in the air.
 - Because helium gas is lighter than air.
- ⑬ Humans can use helium gas safely.
 - Because helium gas is not flammable or poisonous.
- ⑭ Copper is used in making electrical wires.
 - Because copper is a good conductor of electricity and can be stretched into thin, flexible wires.
- ⑮ Copper is used in making the body of cooking pans.
 - Because copper is a good conductor of heat.
- ⑯ Plastic or wood is used in making the handles of cooking pans.
 - Because both of them are a bad conductor of heat.
- ⑰ Steel is used in making screwdrivers and hammers.
 - Because steel is hard and strong.
- ⑱ Glass is used in making windows.
 - Because glass is transparent.

4 What happens:

- ① If the roof of a desert home is made of sticks and leaves?
 - It can't protect it from dirt and dust.

- ② If the roof of a cold climate home is flat?
 - The rain is collected on the top of the roof.
- ③ If you burn a piece of paper?
 - Paper interacts with fire forming ash.
- ④ If the particles of matter move faster? (According to the matter temperature)
 - Matter temperature increases.
- ⑤ To iron nails if they are left in the air for a long time?
 - Iron nail rusts.
- ⑥ If you put a wooden cube and an iron nail in a container of water?
 - The wooden cube floats on the water surface, while the iron nail sinks in water.
- ⑦ If you approach a magnet to some paper clips?
 - Paper clips are attracted to the magnet.
- ⑧ To Blimps, if they are filled with helium gas?
 - Blimps rise up in the air.
- ⑨ You touch the handles of cooking pots that are made of copper?
 - Your hand will be burned because copper is a good conductor of heat.

5 Comparisons

P.O.C	Desert Home	Cold Weather Home	Tropical Rainforest Home
Roof Material	Strong stones.	Ceramic tiles. (Bricks)	Leaves and sticks.
Roof Shape	Flat.	Inclined (Slanted).	Inclined (Slanted).
Reason	– To protect the home from dust and dirt. – To reflect the heat coming from the sun.	– To allow snow or rains to slide over it.	– To prevent animals from getting inside the home.

P.O.C	Sugar	Salt	Flour
Size of Crystals	Large crystals.	Small crystals.	Fine particles.

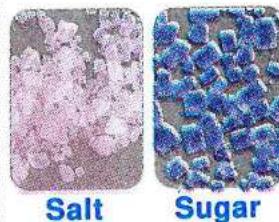
P.O.C	Wooden Cube	Iron Nail	Cork	Stone
Attracted to the Magnet or Not	Not attracted.	Attracted.	Not attracted.	Not attracted.
Sink or Float	Floats.	Sinks.	Floats.	Sinks.

P.O.C	Steel	Glass	Rubber
Properties	• Hard (strong).	• Transparent. • Smooth.	• Waterproof. • Flexible.
Uses	• Screwdrivers. • Hammers.	• Eyeglasses. • Windows. • Electric lamp.	• Tires. • Athletic shoes. • Gloves.

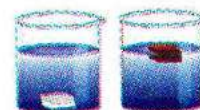
P.O.C	Volume	Mass
Definition	It is the amount of space that matter takes up.	It is a measurement of the amount of matter.
Measuring Units	1 Liters (L). 2 Milliliters (mL). 3 Cubic centimeters (cm³).	1 Kilograms (kg). 2 Grams (g).
Measuring Tools	Measuring cup.	Balance (scale).

6 Summary

- Salt, sugar, and flour have the same color.
- They have different textures, odors, and shapes.
 - a Sugar has **large** crystals.
 - b Salt has **small** crystals.
 - c Flour has **fine** particles.



- Some substances **float** on the water such as **wood** and **cork**.
- Some substances **sink** in the water such as **iron** and **stone**.



- A magnet attracts some metals such as **iron**.



- Temperature measures how quickly the particles in a substance are moving.
- Quickly moving particles produce more heat energy than slow-moving particles.

Volume and Mass

Volume

It is the amount of space that the matter takes up.

Measuring tool

Measuring cup.

Measuring units

Liters – Milliliters – Cubic centimeters (cm^3).
(1 L = 1,000 mL = 1,000 cm^3)

Mass

It is a measurement of the amount of matter.

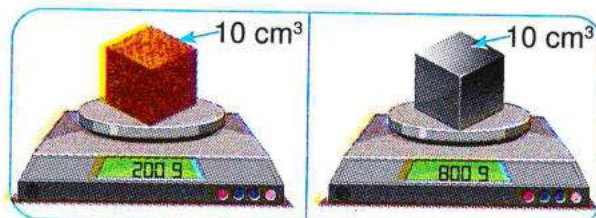
Balance (Scale).

Grams – Kilograms
(1 kg = 1,000 g).

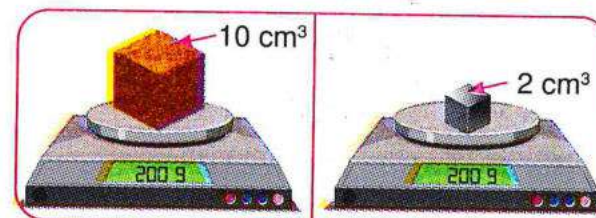
- A paperclip has a mass of about **1 gram**.
- A big bottle of **1 liter** of water has a mass of 1 kilogram.



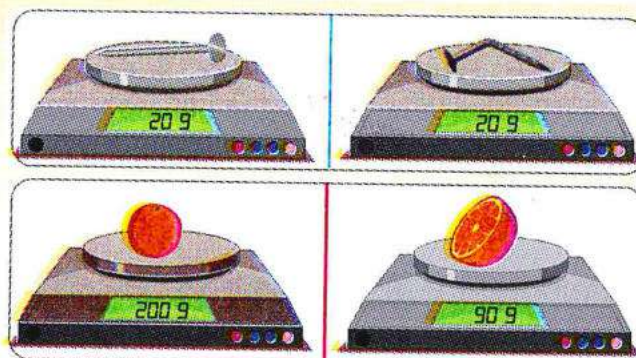
- Equal volumes of different substances have different masses.



- Equal masses of different substances have different volumes.



- Changing the **shape** of a material **doesn't affect** its mass.
- Changing the **size** of a material **affects** its mass.



Roofs

- Roof materials depend on the **climate** where the home is located.

	Desert Home	Cold-Weather Home	Rainforest Home
Figure			
Shape	Flat.	Slanted (inclined).	Slanted (inclined).
Material	Strong stones.	Ceramic tiles (bricks).	Leaves and sticks.
To Protect It From	Dust and dirt.	Rain and snow.	Animals.

Uses of Different Matter

Helium	Properties	Uses
	• Lighter than air. • Not poisonous. • Not flammable.	• To fill balloons. • To fill blimps.
Copper	Properties	Uses
	• Flexible (can be stretched). • Good conductor of electricity and heat.	• Electrical wires. • Cooking pots.
Glass	Properties	Uses
	• Transparent. • Smooth.	• Eyeglasses. • Windows. • Electric lamp.
Steel	Properties	Uses
	• Hard. • Strong.	• Screwdrivers. • Hammers.
Rubber	Properties	Uses
	• Waterproof. • Flexible.	• Tires. • Athletic shoes. • Gloves.

Revision on Concept 2.3

Comparing Changes in Matter

1 Definitions

Melting	A process in which matter changes from a solid state to a liquid state by heating.
Freezing	A process in which matter changes from a liquid state to a solid state by cooling.
Evaporation	A process in which matter changes from a liquid state to a gas state by heating.
Condensation	A process in which matter changes from gas state to liquid state by cooling.
Mixture	It is a form of matter made of two or more substances that do not combine chemically.
Compound	It is a form of matter made of two or more substances that combine chemically.
Physical change	They are changes in the size, shape, or even state of the matter without forming a new substance.
Chemical change	It is a change in the matter and its structure, producing new matter.
Desalination	It is a process of removing salt from water.



2 Importance

Thermal energy	It is used in warming houses and cooking food.
Filtration	It is used to separate solid material that doesn't dissolve in a liquid.
Evaporation	It is used to separate solid material that dissolves in a liquid.
Desalination	It removes salt from water.

3 Give a reason for:

- ① **A chocolate bar melts when putting it in a warm place.**
 - Because the particles chocolate absorb thermal energy, causing them to move faster and spread out, so they change into a liquid state.
- ② **When the temperature of ice cubes increases, they melt.**
 - Because ice particles gain thermal energy causing them to move faster and separate from each other and ice turns into liquid water.
- ③ **Although water vapor is invisible, we can see steam during cooking.**
 - Because the water vapor, produced when water boils, condenses when it touches cooler air, forming a white cloud of tiny water drops.
- ④ **Both melting and freezing processes are considered a physical change.**
 - Because the state of matter changes without any change in its structure.
- ⑤ **Formation of water drops on the lid of a pot containing boiling water.**
 - Due to condensation of water vapor when it touches the cooler lid and it turns from gas state to liquid state.
- ⑥ **Salty water is considered a mixture.**
 - Because its components aren't combined chemically together.
- ⑦ **The atmosphere is considered a mixture.**
 - Because it consists of different gases that are not combined chemically together.
- ⑧ **The components of a mixture can be easily separated.**
 - Because the components of a mixture don't combine chemically together.

- ⑨ Filtration is used to separate sand from water.
 - Because filtration process is used to separate solid material that doesn't dissolve in a liquid.
- ⑩ The color of iodine changes on adding it to starch.
 - Because a new substance is formed with dark blue color.
- ⑪ Making fruit salad is considered as physical change.
 - Because the size of fruits changes without any change in their structure.
- ⑫ Rust formed on an iron nail is an example of a chemical change.
 - Because a new matter called iron oxide is formed due to a reaction between iron, oxygen, and water.
- ⑬ Inflating of a balloon containing baking soda on putting it on a bottle containing an amount of vinegar.
 - Because a gas is produced.
- ⑭ The water of oceans is considered as a mixture.
 - Because it consists of water, salts, minerals, gases, dead organisms, and other living— organisms.
- ⑮ You can't drink the water of oceans and seas.
 - Because drinking salt water makes human dehydrates (loses water quickly).
- ⑯ Desalination process may harm marine organisms.
 - Because small marine organisms may be sucked with water into desalination plants.
 - Because the water that contains large amounts of salt is pumped back into the sea.

4 What happens:

- ① To the particles when solid matter is heated?
 - Its particles move faster and spread out.
- ② To the mass of ice when it melts?
 - The mass doesn't change.
- ③ If you put a cup of water in the freezer?
 - Water changes from liquid state into solid state (ice).
- ④ If the temperature of an amount of liquid increases above its boiling point?
 - Liquid state changes into gas state.

- ⑤ If water vapor touches a cold surface?
 - Water vapor condenses and changes from gas state to liquid state.
- ⑥ If water's temperature is decreased below 0°C ?
 - Water changes from liquid state into solid state.
- ⑦ If water's temperature is heated above 100°C ?
 - Water changes from liquid state into gas state.
- ⑧ If salty water is heated for a long time?
 - Water evaporates leaving the salt in the beaker.
- ⑨ If you add some iodine drops to cornstarch?
 - A new dark blue colored compound is formed.
- ⑩ If you add some baking soda to vinegar?
 - Gas bubbles are formed.
- ⑪ If a bottle of milk is left out the fridge for a few days?
 - A bad smell is produced.
- ⑫ If oxygen combines with carbon and hydrogen?
 - A heat is released that starts a fire.
- ⑬ If salty water is heated for a long time?
 - Water evaporates leaving the salt in the beaker.

5 Comparisons

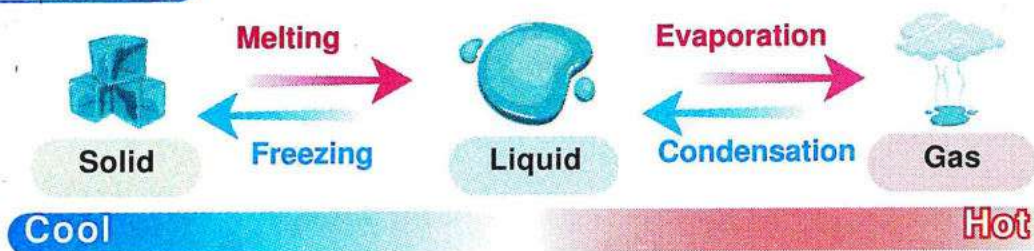
Melting	Freezing	Evaporation	Condensation
A process in which matter changes from a solid state to a liquid state by heating.	A process in which matter changes from a liquid state to a solid state by cooling.	A process in which matter changes from a liquid state to a gas state by heating.	A process in which matter changes from gas state to liquid state by cooling.

P.O.C	Mixture	Compound
Definition	It is a form of matter made of two or more substances that do not combine chemically.	It is a form of matter made of two or more substances that combine chemically.
Examples	Salty water - Salad	Water - Carbon dioxide

P.O.C	Evaporation	Filtration
Way of separation	It is used to separate solid material that dissolves in a liquid.	It is used to separate solid material that doesn't dissolve in a liquid.

P.O.C	Physical Change	Chemical Change
Definition	It is a change in the size, shape, or state of the matter without forming a new substance.	It is a change in the matter and its structure, producing new matter.
Result	No new substance is formed.	A new substance is formed.
Reversed or not	It is reversed.	It isn't reversed easily.
Examples	- Cutting fruit to make salad. - Bending clothes. - Shaping gold. - Melting wax.	- Burning of paper to form ash. - Iron rusting. - Making bread. - Digestion of food. - Rotting fruits.

6 Summary

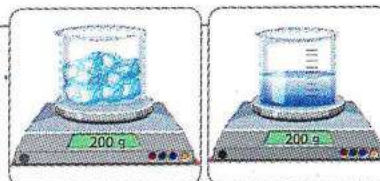


Melting	Freezing	Evaporation	Condensation
Changing matter from a solid state to a liquid state by heating .	Changing matter from a liquid state to a solid state by cooling .	Changing matter from a liquid state to a gas state by heating .	Changing matter from a gas state to a liquid state by cooling .

- **Melting** is the opposite (reverse) process of **freezing**.
- **Evaporation** is the opposite (reverse) process of **condensation**.
- **0°C** is the melting point of water.
- **100°C** is the boiling point of water.
- Water is still liquid between **0°C** and **100°C**.
- When water is cooled below 0°C, the water turns into ice.
- When water is heated above 100°C, water turns into steam.

Changing temperature

- Temperature is a measurement of **how quickly particles** in a substance are moving.
 - **When the temperature of matter increases**, particles move **faster** and get **far from** each other.
 - **When the temperature of matter decreases**, particles move **slower** and get **closer to** each other.
- Changing the temperature affects the **state** of the matter, but it doesn't affect its **mass**.





Heat (Thermal Energy)

- It is a form of energy you use every day for warming houses, cooking food, ...etc.



When the particles of matter absorb light or thermal energy:



The speed of the particles **increases**.

The kinetic energy **increases**.

Matter becomes **warmer**.

Physical Change – Chemical Change

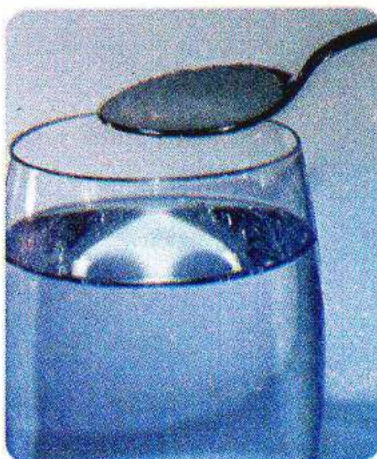
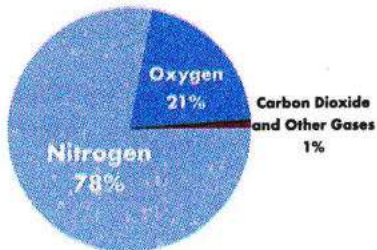
P.O.C	Physical Change	Chemical Change
Properties	- It is a change in the shape, size, or state of matter without changing its structure. (No new substance is formed.) - It can be reversed easily.	- It is a change in the structure of matter to form new matter. (New substance with new properties is formed.) - It can't be reversed.
Examples	- Melting of (wax – ice). - Freezing. - Evaporation. - Condensation. - Cutting of (paper – fruit – cloth). - Grinding sugar into powder. - Bending (shaping) matter.	- Burning of (paper – wood). - Iron rust. - Making bread. - Digestion of food. - Rotting fruits. - Vinegar + baking soda → gas bubbles - Iodine + starch → dark blue substance
	  	  
	  	  

Mixtures and Compounds

- A mixture is different from a compound.
- The mass of each mixture equals the total mass of its components.

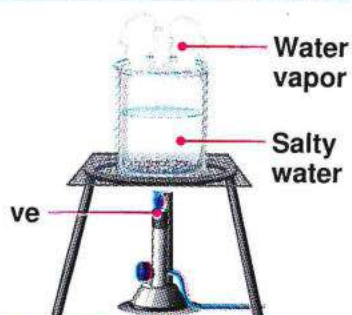
Mixture	Compound
A form of matter made up of two or more substances that don't combine chemically .	A form of matter made up of two or more substances that combine chemically .
Examples	
• Salad. • Atmosphere. • Salty water.	• Carbon dioxide gas. • Water.

A mixture may consist of:

Solid Substances	Solid and Liquid Substances	Gaseous Substances
		
1 Mixture of nuts. 2 Mixture of sand and rocks. 3 Salad.	1 Mixture of salt and water. 2 Mixture of sugar and water.	• Atmosphere (air).

Separation of Mixtures

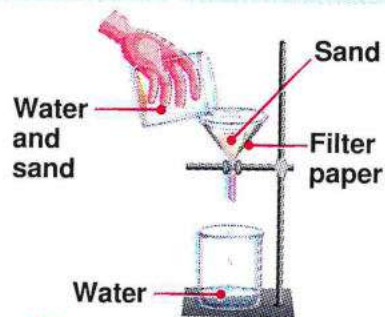
Evaporation



It's used to separate:

Solid material that dissolves in a liquid by **heating**.

Filtration



It's used to separate:

Solid material that doesn't dissolve in a liquid by using a **filter paper**.

Example

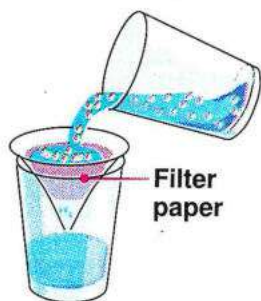
Separation of salt from salty water mixture.

Separation of sand from a mixture of sand and water.

Desalination

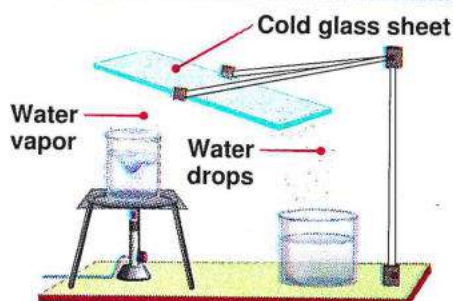
It is the process of **removing** salts from water.

First step: Filtration



Filtration removes any large materials, such as pieces of **seaweed**, **shells**, and **fish**.

Second step: Evaporation



- When boiling filtered water, water vapor rises up leaving salts and other minerals.
- By cooling the rising water vapor, it **condenses** and turns into liquid water that is **safe to drink**.

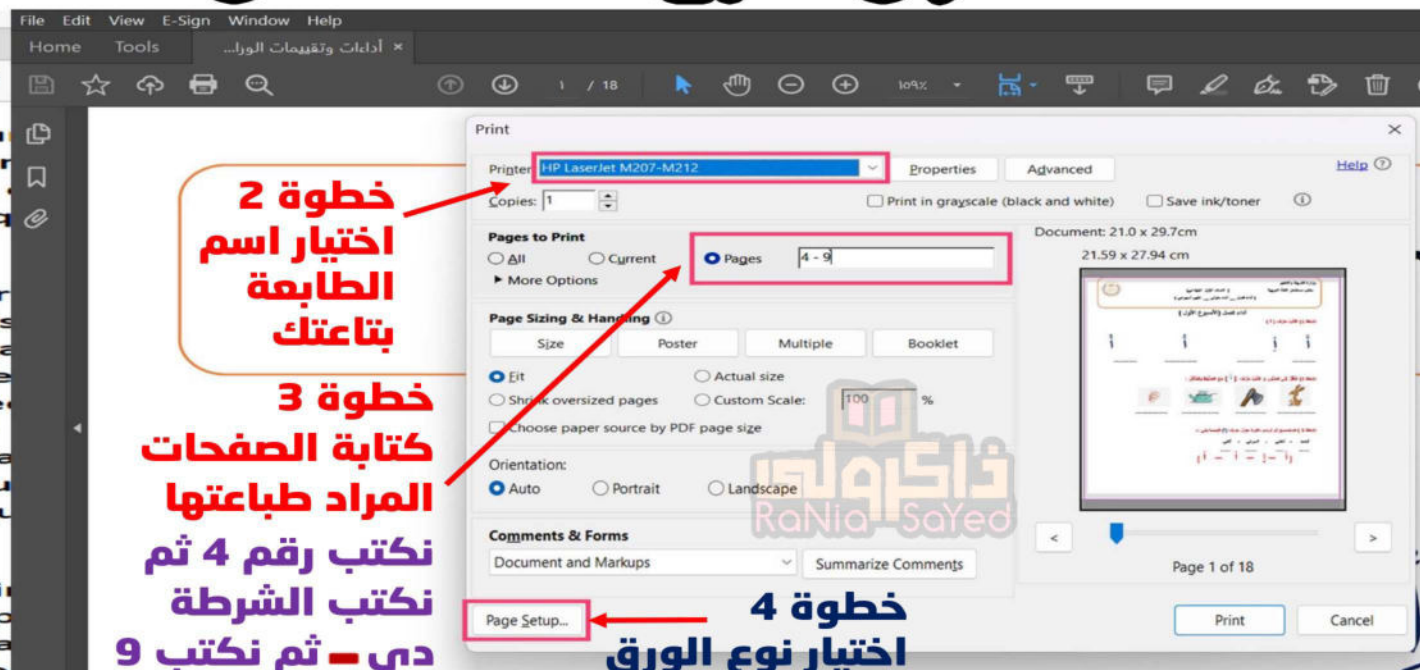
Disadvantages of desalination:

- 1 It is very expensive.
- 2 It requires a lot of energy.
- 3 It has bad effects on the marine organisms.

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



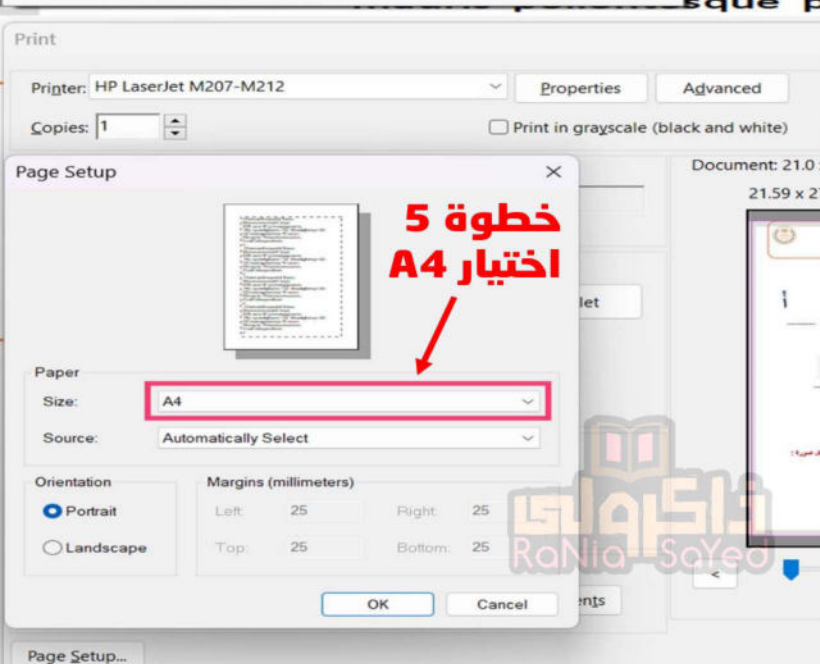
خطوة 1



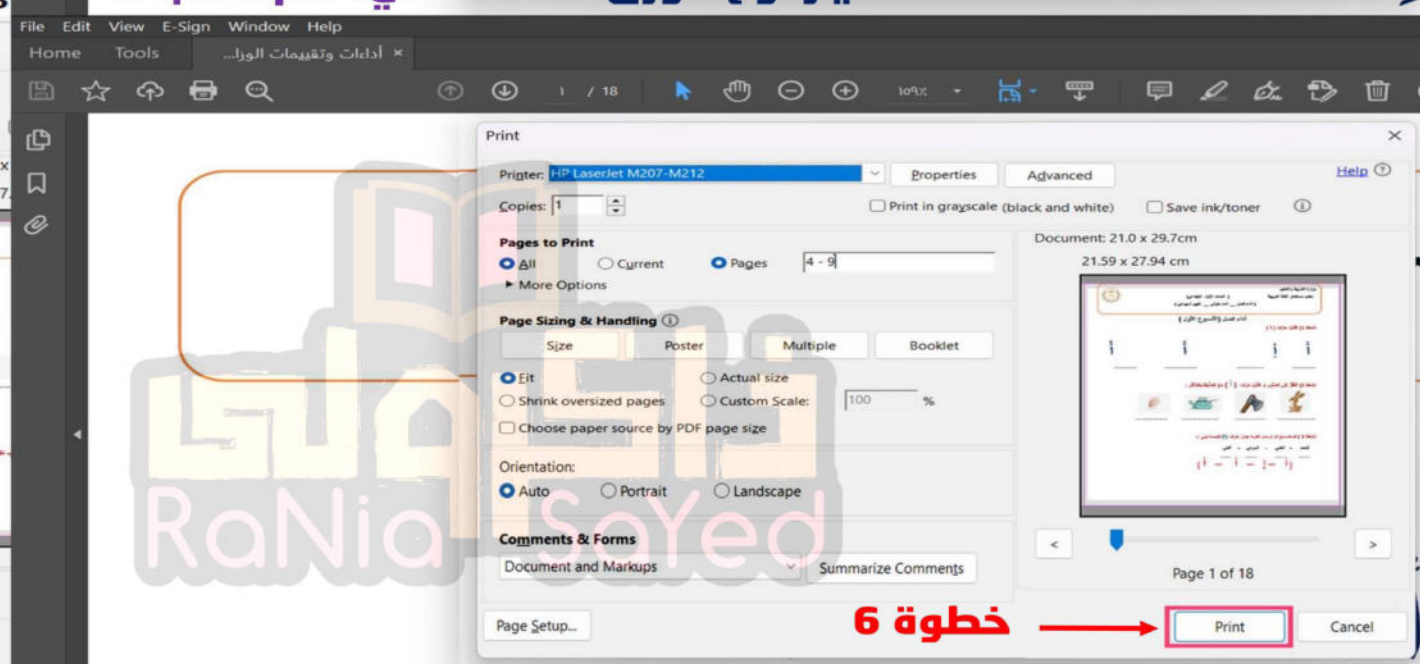
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6

حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الاول



Concept

1.1

Q1

Choose the correct answer:

- 1 The absorb(s) water and salts from the soil.
a. stem b. leaves c. roots
- 2 The deliver(s) water and salts from the roots to the plant leaves.
a. stem b. leaves c. roots
- 3 The process of photosynthesis occurs in the
a. stem b. flowers c. leaves
- 4 The needs of plants and animals are similar in all the following, except
a. water b. air c. method of obtaining food
- 5 is one of the basic needs of plants.
a. Soil b. Air c. Oxygen
- 6 The plant makes its food, which is, through the process of photosynthesis.
a. sugar b. protein c. seeds
- 7 Root hairs help in the amount of water that the plant can take from the soil.
a. decreasing b. increasing c. not changing
- 8 Phloem vessels carry glucose down from the to the rest of the plant parts.
a. leaves b. stems c. roots
- 9 During photosynthesis, plants release into the air so that we can breathe.
a. carbon dioxide b. oxygen c. sugar
- 10 Xylem vessels are tubes that allow water to move from the roots to other parts of the plant.
a. down b. up c. in its place
- 11 is a component within a plant that absorbs sunlight during photosynthesis.
a. Chlorophyll b. Stomata c. Xylem

- 12 Air passes through small openings in the leaves of the plant called
a. xylem b. chlorophyll c. stomata
- 13 The potato plant is known to have a/an stem that extends underground.
a. tuber b. extension c. climber
- 14 The blood rich in oxygen moves inside the body from the heart to the body's organs through the
a. phloem b. veins c. arteries
- 15 In the process of photosynthesis, light energy is converted into energy.
a. gravitational b. thermal c. chemical
- 16 The process of transporting seeds from one place to another is called
a. seed germination b. transpiration
c. seed dispersal
- 17 The blood rich in carbon dioxide returns to the heart through the
a. arteries b. veins c. phloem
- 18 The human transportation system is called the system.
a. digestive b. circulatory c. respiratory
- 19 The plant absorbs gas during the process of photosynthesis.
a. oxygen b. carbon dioxide
c. nitrogen
- 20 The is considered an organ of the circulatory system.
a. skin b. heart c. brain
- 21 The heart consists of chambers.
a. three b. four c. five
- 22 There are several types of leaves, including wide flat leaves, such as the leaves of
a. banana trees b. pine trees c. grapes

Q2 Put (✓) or (X):

- 1 The roots absorb light from the Sun. ()
- 2 Soil is considered a basic need for plant growth. ()
- 3 The plant absorbs water from the soil through the root. ()
- 4 The plant uses natural resources to grow and flourish. ()
- 5 Photosynthesis occurs in plant seeds. ()
- 6 Chlorophyll gives the plant its distinctive green color. ()
- 7 The xylem carries glucose from the leaves to the rest of the plant. ()
- 8 A plant does not need sunlight in the process of photosynthesis. ()
- 9 The arteries and veins in the human body are similar to the vessels of xylem and phloem in plants that transport water and food. ()
- 10 Glucose provides the plant with the energy needed for growth and survival. ()
- 11 Blood moves in the arteries and veins in two directions. ()

Q3 Mention the scientific term:

- 1 They're stems that extend horizontally on the surface of the Earth and help in the formation of new plants, such as the strawberry plant. (.....)
- 2 They're small openings (holes) in the leaves of the plant through which air passes. (.....)
- 3 It's a process that occurs inside the leaves of the plant to make its food. (.....)
- 4 They're thick and solid stems, such as the roots of trees and shrubs. (.....)
- 5 It's a substance responsible for the green color of the plant. (.....)
- 6 They're vessels in the plant that are responsible for transporting nutrients from the leaves to all parts of the plant. (.....)
- 7 They're vessels that transport water and nutrients from the roots to all parts of the plant. (.....)
- 8 They're vessels that transport the blood rich in carbon dioxide and a little oxygen and nutrients from parts of the body to the heart. (.....)
- 9 It's a group of vessels (tubes) that transport important nutrients in one direction between parts of the plant. (.....)

- 10 They're small, dark parts located in the middle of the sunflower. (.....)
- 11 They're the reproductive parts of the plant. (.....)
- 12 It's the process of transferring seeds from one place to another. (.....)

Q4 What is meant by:

- The process of photosynthesis.

.....

.....

.....

Q5 Complete the following sentences:

- 1 Plants get and from the soil.
- 2 The help the plant get water from the soil.
- 3 and water are considered basic needs for the growth and survival of living organisms.
- 4 The energy source of a plant is
- 5 During photosynthesis, light energy is transformed into energy.
- 6 The plant needs gas, water, and sunlight to carry out the photosynthesis process.
- 7 If the appropriate conditions are available for the seeds, they grow and form
- 8 Plant cells depend on as a source of energy and growth.
- 9 The process of is the production of new individuals of the same species.
- 10 Flowers in plants perform the function of
- 11 Coconut seeds are transmitted by
- 12 gas is produced through the process of photosynthesis and humans use it for breathing.
- 13 The transport system in plants is similar to the system in humans.
- 14 There are three types of blood vessels in the human circulatory system: , , and blood capillaries.

Q6 State the scientific reason:

- 1 Plants need sunlight to survive.
.....
- 2 The human body needs water and food daily.
.....
- 3 The little squirrel needs food.
.....
- 4 Sugar is not a basic need for plants.
.....
- 5 There are root hairs in the plant root.
.....
- 6 A plant does not grow well in a paper towel.
.....
- 7 Dandelion seeds spread in the presence of wind.
.....

Q7 What happens if:

- 1 A green plant is placed in a dark place for a week?
.....
- 2 A plant obtains natural resources?
.....
- 3 A plant does not have roots?
.....
- 4 A plant does not have natural resources?
.....
- 5 A green plant is placed in a dark place for a period of time?
.....
- 6 The roots disappear from a plant?
.....

7 Plants disappear from the surface of the Earth?

.....

.....

8 The seed of a plant fall on an unsuitable environment?

.....

9 A plant is left without water for long periods?

.....

10 A seed of a plant falls on a suitable environment?

.....

Q8

Answer the following questions:

1 What role do the leaves play in helping a plant get food?

.....

2 What role does the stem play in helping a plant get food?

.....

3 What role do the roots play in helping a plant get food?

.....

.....

4 The plant stem has many different shapes, mention them.

.....

5 What are the differences between the needs of humans and plants?

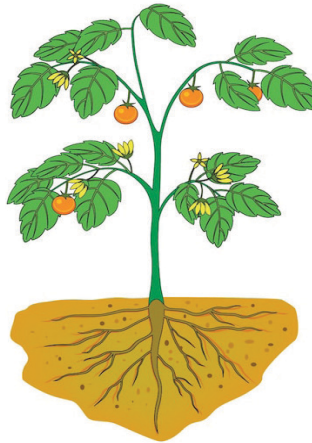
Humans Needs	Plants Needs
.....	
.....	
.....	
.....	
.....	

- 6 What does the picture in front of you indicates?

.....

- 7 Put each word in its correct place.

Roots – Stem – Leaves – Flower



- 8 Look at the two pictures and answer:
What are the types of tree leaves in front of you?

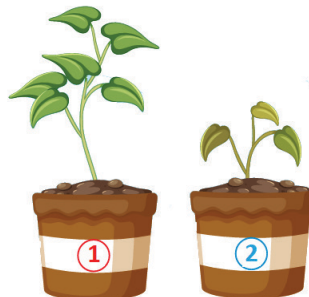


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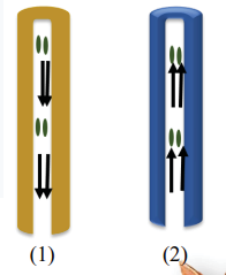
- 9 In front of you is a plant whose shape has changed from picture (1) to picture (2). What is the reason for that?



.....
.....

10 Look at the pictures in front of you, then complete:

- a. The xylem vessel is represented by shape and it carries
- b. The phloem vessel is represented by shape and it carries



11 Look at the picture in front of you.

- a. What is the name of the small, dark things in the middle of the flower?
- b. What is their importance to plants?



12 Notice the pictures of the following seeds and complete the table:

Seed	Dispersal Method
	
	

Concept 1.2

Q1

Choose the correct answer:

- 1 belong(s) to the nonliving components of the ecosystem.
a. Animals b. Plants c. Soil d. Insects
- 2 are among the organisms that produce food.
a. Animals b. Plants c. Soils d. Humans
- 3 Fungi are found in the of the food chain.
a. beginning b. middle c. end d. start
- 4 obtain energy directly from the Sun.
a. Plants b. Humans c. Animals d. Insects
- 5 Which of the following represents a correct food chain?
a. Hawk → Grass → Bacteria → Rabbit → Snake.
b. Grass → Rabbit → Bacteria → Hawk → Snake.
c. Grass → Rabbit → Snake → Hawk → Bacteria.
- 6 organisms increase soil fertility.
a. Producer b. Carnivore c. Herbivore d. Decomposer
- 7 All the following are considered as producer organisms, except
a. carrot b. rabbit c. grass d. cactus
- 8 Which of the following is a correct example of a food chain?
a. Mouse → Snake → Grass. b. Rabbit → Carrots → Bacteria.
c. Grass → Deer → Bacteria. d. Hawk → Fish → Algae.
- 9 Which of the following organisms could end the food chain?
a. Mouse and snake b. Rabbit and carrots
c. Grass and cactus d. Bacteria and fungi
- 10 A food chain begins with
a. decomposers b. producers c. consumers d. humans
- 11 A plant obtains energy directly from the
a. moon b. animals c. Sun d. humans
- 12 organisms are responsible for returning the organic elements to the soil.
a. Producer b. Consumer c. Decomposers d. Predators

- 13 Energy passes between living organisms through the
 a. ecosystem b. water c. air d. soil
- 14 Which of the following are decomposers?
 a. Locusts b. Hawks c. Grass d. Bacteria
- 15 All the following are considered consumer organisms, except

 a. owls b. rabbits c. algae d. grasshoppers
- 16 Energy passes from the Sun to the consumer organisms through
 organisms.
 a. predator b. producer c. decomposer d. prey

Q2

Put (✓) or (X):

- 1 The lion is a consumer organism. ()
- 2 Humans are the main source of energy on Earth. ()
- 3 In the ecosystem, energy is transferred from one organism to another. ()
- 4 Light seeds are spread by wind. ()
- 5 A food chain begins with consumers. ()
- 6 An ecosystem is several interconnected food chains. ()
- 7 A snake is an example of a predator and prey in some food chains. ()

Q3

Mention the scientific term:

- 1 It is the path of energy flow from one organism to another. (.....)
- 2 It is a process in which the plant obtains energy. (.....)
- 3 It is a system consisting of living organisms and nonliving things. (.....)
- 4 It is the main source of energy on Earth. (.....)
- 5 They are organisms that produce their own food. (.....)
- 6 It is a group of different food chains that interact together. (.....)

Q4 Complete the following sentences:

- 1 The main source of energy on the surface of the Earth is
- 2 An ecosystem consists of and
- 3 feed on the remains of dead organisms.
- 4 are consumer organisms.
- 5 Energy is transferred from to consumers through the food chain.
- 6 An animal that feeds on another animal is called
- 7 Fish and birds are organisms.
- 8 A food chain ends with organisms.
- 9 When a fox feeds on a rabbit, the rabbit is called
- 10 The interconnection of a group of food chains is known as a
- 11 The food chain begins with a organism.
- 12 Light seeds are spread by
- 13 The organisms responsible for returning organic elements to the soil are the s.

Q5 Give reasons for:

- 1 Trees are considered as producers.
.....
.....
- 2 The food web is a system of energy flow.
.....
.....

Q6 What happens if:

- 1 Decomposers disappear?
.....
.....
- 2 Sunlight does not reach the Earth?
.....
.....

Q7. Answer the following:**Q1. Mention:**

- 1 One example of a decomposer organism.
.....
- 2 One example of a consumer organism.
.....
- 3 One example of a producer organism.
.....
- 4 The way of sticky and rough seeds dispersal.
.....
- 5 The role of decomposers in the food chain.
.....
.....
- 6 The importance of the earthworms to the soil.
.....

Q2. Explain the following statements:

- a. A plant needs sunlight.
.....
- b. A food web is an energy flow system.
.....
.....

Q3. Create food chains from the following organisms.

- a. Rabbits – Grass – Hawks – Snakes
.....
- b. Insects – Snakes – Grass – Frogs – Hawks
.....
- c. Rabbits – Carrots – Snakes – Bacteria – Hawks
.....
- d. Mice – Grass – Hawks – Snakes
.....

Concept 1.3

Q1

Choose the correct answer:

- 1 The drying up of lakes leads to a/an in the ecosystem.
a. stability **b.** imbalance **c.** strength **d.** balance
- 2 When the grass in the ecosystem decreases, the number of rabbits
a. increases **b.** is not affected **c.** decreases **d.** remains the same
- 3 Which of the following organisms begins the marine ecosystem?
a. Algae **b.** Mollusks **c.** Sharks **d.** Grass
- 4 A cactus is considered a organism in the desert food web.
a. producer **b.** consumer **c.** decomposer **d.** prey
- 5 The is created to preserve marine organisms in their ecosystem.
a. desert **b.** aquarium **c.** protected marine environment
- 6 All the following cause disruption to food webs in the desert environment, except
a. drought **b.** light rain **c.** pollution **d.** floods
- 7 Algae are found in the of the marine food chain.
a. beginning **b.** middle **c.** end **d.** last
- 8 Which of the following organisms begins the food chain in the desert environment?
a. Rabbit **b.** Fox **c.** Grass **d.** Algae
- 9 All the following organisms are affected by plastic materials in water, except
a. seabirds **b.** algae **c.** whales **d.** sea turtles
- 10 are considered homes to many fish.
a. Microorganisms **b.** Marine algae **c.** Sea turtles **d.** Coral reefs
- 11 is considered one of the human activities that negatively affect the marine environment.
a. Loss of algae **b.** Climate change
c. Throwing plastic materials into the seas
d. Recycling plastic

- 12 A food chain in the ocean begins with
 a. small fish. b. microorganisms c. sea turtles d. starfish
- 13 Overfishing leads to a/an in the number of marine organisms.
 a. increase b. growth c. decrease d. a lot of
- 14 All the following happen when the temperature of water rises in the oceans, except
 a. increased numbers of microorganisms
 b. corals get rid of algae
 c. small fish move to other areas d. coral bleaching
- 15 Microorganisms need water to survive.
 a. moderate b. cold c. hot d. warm
- 16 cause the death of marine organisms when feeding on them.
 a. Floods b. Plants
 c. Algae d. Plastic materials
- 17 The phenomenon of coral bleaching happens as a result of water temperature.
 a. rising b. moderating c. decreasing d. constant
- 18 is considered one of the causes of disruption in the marine environmental web.
 a. Habitat restoration b. Nursery
 c. Overfishing d. Heavy rain

Q2

Put (✓) or (X):

- 1 An ecosystem is affected when decomposers disappear. ()
- 2 A food chain in the desert environment begins with algae. ()
- 3 The octopus is an example of a producer organism in the marine ecosystem. ()
- 4 Heavy rain leads to a disruption in the desert ecosystem. ()
- 5 Coral reefs are habitats to many fish. ()
- 6 Loss of habitat is one of the most important causes of extinction. ()
- 7 Recycling plastics contributes to preserving the ecosystem. ()
- 8 Plastic materials have a positive effect on marine organisms. ()

- 9 The number of living organisms decreases if climatic conditions are suitable. ()
- 10 Human activities that occur on land effect the marine ecosystem. ()

Q3 Mention the scientific term:

- 1 It is the disappearance or death a species of marine organisms.
(.....)
- 2 It is an area in the ocean where small pieces of corals are cared for.(.....)
- 3 They are small pieces of plastic material that are a grain of rice size.
(.....)

Q4 Complete the following sentences:

- 1 The absence of producers leads to the of consumers.
- 2 Energy passes from to locusts in the desert environment.
- 3 When producer organisms disappear from an ecosystem,
..... organisms die.
- 4 The Island of Palau needs to establish a to protect its waters from pollution.
- 5 Loss of habitat is one of the most important reasons for
- 6 Seabirds depend on for their food.
- 7 Marine microorganisms move to a new habitat when there is a change in the
- 8 Algae are considered organisms in the marine environment.
- 9 causes plastic materials to break down into small particles.
- 10 Coral reefs turn white due to the in water temperature.

Q5 Give reasons for:

- 1 Sea turtles eat a lot of plastic materials.
.....
- 2 The phenomenon of coral bleaching occurs.
.....
.....

Q6**What happens if:**

- 1 Drought occurs in an ecosystem?
.....
.....
- 2 Grass disappears from the desert ecosystem?
.....
.....
- 3 The water temperature increases for microorganisms?
.....
- 4 The amount of plastic materials in the marine environment increases?
.....
.....
- 5 Living organisms cannot adapt to climate changes?
.....
.....

Q7**Answer the following questions****Q1. Mention:**

- 1 Some methods that are used to reduce pollution of the marine environment with plastic materials.
.....
.....
- 2 One of the causes of habitat loss.
.....
.....
- 3 The importance of the nursery.
.....
.....

Q2. Create a food chain from the following organisms:

- Sea urchins – Sharks – Algae – Parrotfish
.....

Concept 2.1

Q1

Choose the correct answer:

- 1 Which of the following substances consists of particles that are closely connected to each other?
a. Helium gas **b.** Wood **c.** Water vapor **d.** Cooking oil
- 2 The matter consists of a group of
a. organs **b.** devices **c.** gases **d.** particles
- 3 The atmospheric air is considered a matter.
a. solid **b.** frozen **c.** liquid **d.** gaseous
- 4 Which of the following is not considered a matter?
a. Wood **b.** Air **c.** Light **d.** Water
- 5 Pens and rulers are examples of matter.
a. solid **b.** liquid
c. gaseous **d.** all the previous
- 6 The particles of matter are very close to each other in the state of
a. oxygen **b.** water **c.** oil **d.** iron
- 7 Water is found in nature in states.
a. three **b.** four **c.** five **d.** six
- 8 Everything that has mass and occupies space is called
a. volume **b.** state **c.** matter **d.** mass
- 9 The distances between the particles of a gaseous matter are the distances between the particles of a liquid matter.
a. double **b.** greater than **c.** equal to **d.** smaller than
- 10 The is considered a similar copy to the real thing to illustrate its shape or the way it works.
a. energy **b.** particle **c.** model **d.** matter
- 11 A matter has a fixed volume and a variable shape.
a. solid **b.** liquid **c.** frozen **d.** gaseous
- 12 Which of the following consists of particles that are interconnected and very close together?
a. Edible oil **b.** Water vapor **c.** Helium **d.** Wood

- 13 The movement of water particles is slower than the movement of
 a. oil b. cars c. hydrogen d. juice
- 14 The steam rising from food is an example of a state.
 a. solid b. liquid c. gaseous d. frozen
- 15 Which of the following substances can be poured?
 a. Salt b. Water vapor c. Milk d. Air

Q2 Put (✓) or (X):

- 1 Sound is a form of energy. ()
- 2 Ice turns into a liquid by cooling. ()
- 3 A gaseous matter does not occupy space. ()
- 4 Milk has a fixed shape whatever the shape of the container is. ()
- 5 The same substance can exist in nature in more than one state. ()
- 6 When we press on a balloon, its volume increases. ()
- 7 Models help us understand how things work. ()
- 8 The particles of solid matter spread very quickly. ()
- 9 Germs can be seen with the naked eye. ()
- 10 Solids, liquids, and gases have a specific shape in common. ()
- 11 A gaseous matter has a fixed volume and an unstable shape. ()

Q3 Mention the type of each of the following matters:

Oil – Book – Apple – Water vapor – Table – Ruler – Helium – Tree – Vinegar

.....

.....

.....

Q4 Write what the following statements mean:

- 1 It is the amount of space occupied by a body. (.....)
- 2 It is a matter whose particles are not interconnected and move completely freely. (.....)
- 3 They are the small units that make up matter. (.....)
- 4 It is the state of water after freezing. (.....)

- 5 It is a copy of something to show what it looks like or how it works. (.....)
- 6 It is a state of matter whose shape is variable and volume is constant. (.....)
- 7 They are the building units of matter. (.....)

Q5

Complete the following sentences:

- 1 Matter can exist in **3** states.
- 2 Matter can be poured in the state.
- 3 Sound is considered a form of
- 4 Everything that has mass and occupies space is called
- 5 Water can exist in a solid state in the form of
- 6 The particles of matter are very close together in matter.
- 7 The particles of a matter spread very quickly.
- 8 A matter can be poured, but a solid matter cannot be poured.
- 9 A pen is an example of a matter.
- 10 The state of water changes when it is heated or cooled.
- 11 Matter consists of small units called
- 12 Gases have shape and volume.
- 13 A matter has a fixed shape and volume.
- 14 The shape of a matter and its volume are variable.

Q6

Mention the importance of:

- 1 Earth model.

.....

.....

.....

- 2 Solar system model.

.....

.....

.....

Q7 Compare between:

- The solid, liquid, and gaseous states in terms of:

* The arrangement of particles

* Strength of the bond between them

P.O.C	Solid	Liquid	Gaseous
Arrangement of Particles			
Strength of Bond			

Q8 Give reasons for:

- 1 Vinegar takes the shape of the container that it is placed in.

.....

- 2 Oxygen has an indefinite shape and volume.

.....

- 3 The cup has a definite shape and volume.

.....

Q9 What happens if:

- 1 You put a bottle of water in the freezer?

.....

- 2 You expose a piece of ice to the Sun for a long time?

.....

- 3 Water is exposed to a high temperature?

.....

- 4 You press on an inflated balloon?

.....

- 5 Water is exposed to a low temperature?

.....

Concept 2.2

Choose the correct answer:

- 1 We use the unit to measure the mass of the body.

a. liter b. kilogram

c. meter d. cubic centimeter
- 2 All the following are chemical properties of matter, except

a. burning b. combustion c. color d. rust
- 3 We use a to measure temperature.

a. ruler b. thermometer

c. measuring cup d. common balance
- 4 The amount of matter that the body contains is known as

a. volume b. temperature c. mass d. length
- 5 A tape measure is used to measure the

a. temperature b. weight c. volume d. length
- 6 The is known as the space occupied by a body.

a. mass b. volume c. length d. temperature
- 7 We use a to measure the mass of a book.

a. measuring cup b. measuring tape

c. common balance d. thermometer
- 8 The is considered one of the chemical properties of matter.

a. color of apples b. smell of vinegar

c. burning of a paper d. color of gold
- 9 5 liters = cm³

a. 0.5 b. 50 c. 500 d. 5,000
- 10 is used in making car tires.

a. Copper b. Helium c. Rubber d. Glass
- 11 floats above the surface of water.

a. Iron b. Aluminum c. Wood d. Copper
- 12 Which of the following properties of matter cannot be measured?

a. Length b. Mass c. Taste d. Volume

- 13 is considered one of the matters that are attracted to magnets.
 a. Plastic b. Wood c. Iron d. Cork
- 14 is used to make medical glasses.
 a. Helium b. Glass c. Rubber d. Iron
- 15 A is used to measure the volume of a matter.
 a. common balance b. measuring tape
 c. measuring cup d. thermometer
- 16 All the following describe the physical properties of matter, except the
 a. texture b. taste c. iron rust d. color
- 17 All the following are units of mass measurement, except
 a. tons b. grams c. liters d. kilograms

Q2 Put (✓) or (X):

- 1 The shapes of houses vary from one environment to another. ()
- 2 A ruler is used to measure the mass of objects. ()
- 3 The texture of the fabric is one of the chemical properties of the matter. ()
- 4 Iron rust is considered a physical change in the matter. ()
- 5 Temperature expresses the speed of particles movement in the matter. ()
- 6 It is possible to distinguish between iron and gold using the sense of smell. ()
- 7 Balloons are filled with helium gas. ()
- 8 Wood is a good conductor of electricity. ()
- 9 A measuring cup is used to measure the temperature. ()
- 10 The mass of matter changes from one state to another. ()
- 11 Shape and volume are physical properties of matter. ()
- 12 The roof of a desert house is similar to the roof of a house in a tropical forest. ()

Q3 Write what the following statements mean:

- 1 It is a non-toxic material used to fill air balloons. (.....)
- 2 It is the ability of a material to transfer electricity and heat through it. (.....)
- 3 They are the properties that can be observed using the five senses. (.....)

Q4 Complete the following sentences:

- 1 The of matter is measured by a measuring cup.
- 2 The length of a classroom can be measured by unit.
- 3 3 kilograms = grams.
- 4 Iron rust is an example of the properties of a matter.
- 5 Color, taste, and smell are the properties of a matter.
- 6 is used to measure the volume of a matter.
- 7 gas is used to fill balloons.
- 8 is used to make electrical wires because it is a good conductor of electricity.
- 9 is used to make cooking utensils.
- 10 The roof of the house is sloping in places with weather.
- 11 Thermal conduction is one of the properties of matter.
- 12 The roof of the house is flat in places with weather.

Q5 Mention one of the uses of:

- 1 Copper:
- 2 Helium:
- 3 Glass:

Q6 Give reasons for:

- 1 Cookware handles are made of plastic not metal.

.....

2 Glass is used to make electric lamps.

.....

3 Wood is not used to make electrical wires.

.....

Q7**What happens if:**

1 The particles of the matter are interconnected and close in relation to their density?

.....

2 The density of the substance is greater than the density of the liquid?

.....

3 The density of the matter is less than the density of the liquid?

.....

Concept 2.3

Q1

Choose the correct answer:

- 1 The mass of ice after melting is its mass before melting.
a. double **b.** greater than **c.** equal to **d.** less than
- 2 When water is placed in the freezer, it turns into ice as a result of
a. melting **b.** freezing **c.** filtration **d.** evaporation
- 3 The process of freezing is the reverse process of
a. boiling **b.** melting **c.** condensation **d.** evaporation
- 4 Examples of physical processes include
a. iron rusting **b.** wood burning
c. paper burning **d.** making a fruit salad
- 5 Liquid chocolate can be returned into its solid state by
a. heating **b.** cooling **c.** evaporation **d.** condensation
- 6 The speed of particles movement increases in the process of
a. freezing **b.** melting **c.** condensation **d.** cooling
- 7 The components of a mixture of sand and water are separated by
a. filtration **b.** evaporation
c. cooling **d.** filtration and cooling
- 8 Condensation is the change of matter from the state to the liquid state.
a. solid **b.** gaseous **c.** physical **d.** chemical
- 9 A chemical change occurs when a paper.
a. bending **b.** cutting **c.** burning **d.** grinding
- 10 The melting of wax is considered a/an change.
a. environmental **b.** chemical **c.** organic **d.** physical
- 11 is considered a physical change.
a. Bread making **b.** Rock crushing **c.** Iron rust **d.** Wood burning

- 12 The mass of a mixture before mixing is its mass after mixing.
 a. greater than b. equal to c. smaller than d. double
- 13 What is the correct order of water desalination steps?
 a. Evaporation – Filtration – Condensation
 b. Condensation – Filtration – Evaporation
 c. Filtration – Evaporation – Condensation
 d. Evaporation – Condensation – Filtration
- 14 All the following are physical changes, except
 a. cutting vegetables b. burning a paper
 c. cutting cloth d. melting ice
- 15 The formation of copper into wires is a/an change.
 a. thermal b. chemical
 c. environmental d. physical
- 16 All the following are chemical changes of matter, except
 a. burning wood b. cutting fruits c. food digestion d. iron rust

Q2

Put (✓) or (X):

- 1 Heat is a form of matter. ()
- 2 Melting is the transformation of ice into water. ()
- 3 A mixture consists of only one substance. ()
- 4 Changing the temperature affects the shape and mass of matter. ()
- 5 When a liquid matter is heated, it turns into a solid state. ()
- 6 Separating mixtures by evaporation requires raising the temperature. ()
- 7 Grinding sugar is considered a physical change. ()
- 8 The change in the state of water from a solid to a liquid is a chemical change. ()
- 9 A physical change is a change in the form of matter only. ()
- 10 The formation of rust on an iron nail is an evidence of chemical change. ()
- 11 Salty sea water becomes drinkable after the filtration stage. ()
- 12 Melting of wax produces a new substance, so this is considered a chemical change. ()

Q3 Write what the following statements mean:

- 1 It is the process of changing matter from a solid state to a liquid state by raising the temperature. (.....)
- 2 It is the process of changing matter from a gaseous state to a liquid state. (.....)
- 3 It consists of two or more mixed substances that can be easily separated. (.....)
- 4 It is a red chemical crust resulting from the reaction of iron with oxygen. (.....)
- 5 It is a change in the shape, size, and state of matter. (.....)
- 6 It is a change in the composition of matter and a new substance is produced. (.....)

Q4 Complete the following sentences:

- 1 Water turns into steam as a result of thermal energy.
- 2 consists of two or more substances combined chemically.
- 3 The movement of matter particles increases when the temperature of the matter
- 4 The change of matter from a gaseous state to a liquid state is called
- 5 A mixture of a solid dissolved in water is separated by
- 6 The consists of two or more substances that are not chemically combined.
- 7 A matter changes from a solid state to a liquid state when it thermal energy.
- 8 Heat is one of the forms of
- 9 The transformation of ice into water is considered a change.
- 10 changes do not change the composition of matter.
- 11 Salty sea water becomes drinkable after the stage.
- 12 The formation of gas bubbles when mixing an amount of vinegar with baking soda is an evidence of a change in the matter.

- 13 Forming copper into wire is considered a change.
- 14 Digestion of food within the body's cells is a change.
- 15 Melting a piece of butter is a change.

Q5 Classify the change that occurs:

- 1 Wax melting
- 2 Cloth bending
- 3 Wood burning

Q6 What is meant by:

- 1 Freezing
.....
- 2 Melting
.....
- 3 Condensation
.....
.....

Q7 Give reasons for:

- 1 Heat is not a matter.
.....
- 2 The Earth's atmosphere is a mixture.
.....
.....
- 3 Melting is a physical change.
.....
- 4 Burning wood is a chemical change.
.....
.....
- 5 Dissolving sugar in water is a physical change.
.....

Q8

What happens:

- 1 To the mass of a matter when heated or cooled?
.....
- 2 When we place a piece of ice in the Sun for a long period of time?
.....
.....
- 3 When water is cooled to a temperature below zero degrees Celsius?
.....
- 4 When we mix vinegar and baking soda?
.....
- 5 When iron is left in the air without coating.
.....

Concept

1.1

Q1

Choose the correct answer:

- 1 The absorb(s) water and salts from the soil.
a. stem b. leaves c. roots
- 2 The deliver(s) water and salts from the roots to the plant leaves.
a. stem b. leaves c. roots
- 3 The process of photosynthesis occurs in the
a. stem b. flowers c. leaves
- 4 The needs of plants and animals are similar in all the following, except
a. water b. air c. method of obtaining food
- 5 is one of the basic needs of plants.
a. Soil b. Air c. Oxygen
- 6 The plant makes its food, which is, through the process of photosynthesis.
a. sugar b. protein c. seeds
- 7 Root hairs help in the amount of water that the plant can take from the soil.
a. decreasing b. increasing c. not changing
- 8 Phloem vessels carry glucose down from the to the rest of the plant parts.
a. leaves b. stems c. roots
- 9 During photosynthesis, plants release into the air so that we can breathe.
a. carbon dioxide b. oxygen c. sugar
- 10 Xylem vessels are tubes that allow water to move from the roots to other parts of the plant.
a. down b. up c. in its place
- 11 is a component within a plant that absorbs sunlight during photosynthesis.
a. Chlorophyll b. Stomata c. Xylem

- 12 Air passes through small openings in the leaves of the plant called
 a. xylem b. chlorophyll c. stomata
- 13 The potato plant is known to have a/an stem that extends underground.
 a. tuber b. extension c. climber
- 14 The blood rich in oxygen moves inside the body from the heart to the body's organs through the
 a. phloem b. veins c. arteries
- 15 In the process of photosynthesis, light energy is converted into energy.
 a. gravitational b. thermal c. chemical
- 16 The process of transporting seeds from one place to another is called
 a. seed germination b. transpiration
 c. seed dispersal
- 17 The blood rich in carbon dioxide returns to the heart through the
 a. arteries b. veins c. phloem
- 18 The human transportation system is called the system.
 a. digestive b. circulatory c. respiratory
- 19 The plant absorbs gas during the process of photosynthesis.
 a. oxygen b. carbon dioxide
 c. nitrogen
- 20 The is considered an organ of the circulatory system.
 a. skin b. heart c. brain
- 21 The heart consists of chambers.
 a. three b. four c. five
- 22 There are several types of leaves, including wide flat leaves, such as the leaves of
 a. banana trees b. pine trees c. grapes

Q2

Put (✓) or (X):

- 1 The roots absorb light from the Sun. (X)
- 2 Soil is considered a basic need for plant growth. (X)
- 3 The plant absorbs water from the soil through the root. (✓)
- 4 The plant uses natural resources to grow and flourish. (✓)
- 5 Photosynthesis occurs in plant seeds. (X)
- 6 Chlorophyll gives the plant its distinctive green color. (✓)
- 7 The xylem carries glucose from the leaves to the rest of the plant. (X)
- 8 A plant does not need sunlight in the process of photosynthesis. (X)
- 9 The arteries and veins in the human body are similar to the vessels of xylem and phloem in plants that transport water and food. (✓)
- 10 Glucose provides the plant with the energy needed for growth and survival. (✓)
- 11 Blood moves in the arteries and veins in two directions. (X)

Q3

Mention the scientific term:

- 1 They're stems that extend horizontally on the surface of the Earth and help in the formation of new plants, such as the strawberry plant. (Runner stems)
- 2 They're small openings (holes) in the leaves of the plant through which air passes. (Stomata)
- 3 It's a process that occurs inside the leaves of the plant to make its food. (Photosynthesis process)
- 4 They're thick and solid stems, such as the roots of trees and shrubs. (Woodstems)
- 5 It's a substance responsible for the green color of the plant. (Chlorophyll)
- 6 They're vessels in the plant that are responsible for transporting nutrients from the leaves to all parts of the plant. (Phloem)
- 7 They're vessels that transport water and nutrients from the roots to all parts of the plant. (Xylem)
- 8 They're vessels that transport the blood rich in carbon dioxide and a little oxygen and nutrients from parts of the body to the heart. (Veins)
- 9 It's a group of vessels (tubes) that transport important nutrients in one direction between parts of the plant. (Plant transport system)

- 10 They're small, dark parts located in the middle of the sunflower. (Seeds)
- 11 They're the reproductive parts of the plant. (Flowers)
- 12 It's the process of transferring seeds from one place to another. (Seeds dispersal)

Q4 What is meant by:

- The process of photosynthesis.

It is the process through which the green plants (leaves) absorb sunlight to make their own food

Sunlight + Carbon dioxide + Water → Oxygen + Sugar

Q5 Complete the following sentences:

- 1 Plants get water and nutrients from the soil.
- 2 The roots help the plant get water from the soil.
- 3 Air and water are considered basic needs for the growth and survival of living organisms.
- 4 The energy source of a plant is glucose sugar.
- 5 During photosynthesis, light energy is transformed into chemical energy.
- 6 The plant needs carbon dioxide gas, water, and sunlight to carry out the photosynthesis process.
- 7 If the appropriate conditions are available for the seeds, they grow and form sprouts.
- 8 Plant cells depend on glucose sugar as a source of energy and growth.
- 9 The process of reproduction is the production of new individuals of the same species.
- 10 Flowers in plants perform the function of reproduction.
- 11 Coconut seeds are transmitted by water.
- 12 Oxygen gas is produced through the process of photosynthesis and humans use it for breathing.
- 13 The transport system in plants is similar to the circulatory system in humans.
- 14 There are three types of blood vessels in the human circulatory system: arteries, veins, and blood capillaries.

Q6

State the scientific reason:

- 1 Plants need sunlight to survive.
To make their own food by the photosynthesis process.
- 2 The human body needs water and food daily.
To get energy to do life activities.
- 3 The little squirrel needs food.
To get energy to grow and survive.
- 4 Sugar is not a basic need for plants.
Because plants can make it during the photosynthesis process.
- 5 There are root hairs in the plant root.
To increase the amount of absorbed water and nutrients from the soil.
- 6 A plant does not grow well in a paper towel.
Because it needs nutrients from the soil to grow well.
- 7 Dandelion seeds spread in the presence of wind.
Because they are light seeds.

Q7

What happens if:

- 1 A green plant is placed in a dark place for a week?
It will die because it can't make its own food by the photosynthesis process.
- 2 A plant obtains natural resources?
It will grow well and survive.
- 3 A plant does not have roots?
It can't absorb water and nutrients from the soil and can't be fixed in the soil.
- 4 A plant does not have natural resources?
It can't make its food through the photosynthesis process, so it will die.
- 5 A green plant is placed in a dark place for a period of time?
It will die because it can't make its own food by the photosynthesis process.
- 6 The roots disappear from a plant?
The plant can't absorb water and nutrients from the soil.

- 7 Plants disappear from the surface of the Earth?

All living organisms will die because they can't breathe in oxygen gas that is produced from the photosynthesis process.

- 8 The seed of a plant fall on an unsuitable environment?

It can't germinate to form a new plant.

- 9 A plant is left without water for long periods?

It will die because it can't make its own food by the photosynthesis process.

- 10 A seed of a plant falls on a suitable environment?

The seed will grow (germinate) to form a new plant.

Q8

Answer the following questions:

- 1 What role do the leaves play in helping a plant get food?

Leaves make food for the plant through the photosynthesis process.

- 2 What role does the stem play in helping a plant get food?

It transports water and nutrients from the roots to the leaves.

- 3 What role do the roots play in helping a plant get food?

They absorb water and nutrients from the soil and fix the plant in the soil.

- 4 The plant stem has many different shapes, mention them.

Wood stem – upright stem – climb stem – runner stem – tuber stem

- 5 What are the differences between the needs of humans and plants?

Humans Needs	Plants Needs
Food Water Air Shelter	Sunlight Air Water Space to grow Nutrients

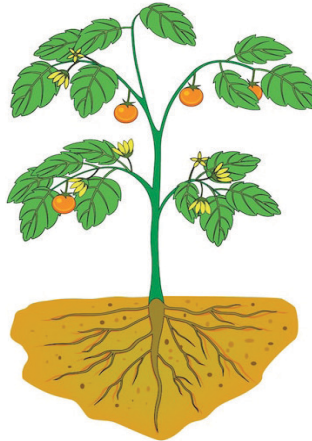
- 6 What does the picture in front of you indicates?

Germination process



- 7 Put each word in its correct place.

Roots – Stem – Leaves – Flower



- 8 Look at the two pictures and answer:
What are the types of tree leaves in front of you?

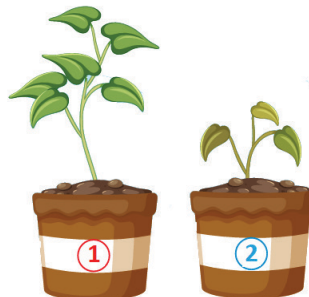


Wide leaves



Needle leaves

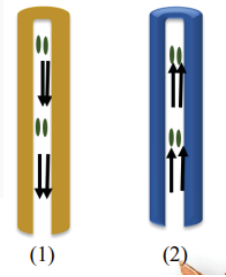
- 9 In front of you is a plant whose shape has changed from picture (1) to picture (2). What is the reason for that?



Because without access to carbon dioxide, sunlight, or water, a plant cannot carry out photosynthesis, so it will die.

10 Look at the pictures in front of you, then complete:

- The xylem vessel is represented by shape (2) and it carries **water and nutrients**.
- The phloem vessel is represented by shape (1) and it carries **plant food (glucose sugar)**.



11 Look at the picture in front of you.

- What is the name of the small, dark things in the middle of the flower? **The seeds**
- What is their importance to plants?



It is the reproductive part of the plant.

Because they help the plant reproduce by producing seeds.

12 Notice the pictures of the following seeds and complete the table:

Seed	Dispersal Method
	By wind
	By wind

Concept

1.2

Q1

Choose the correct answer:

- 1 belong(s) to the nonliving components of the ecosystem.
a. Animals b. Plants c. Soil d. Insects
- 2 are among the organisms that produce food.
a. Animals b. Plants c. Soils d. Humans
- 3 Fungi are found in the of the food chain.
a. beginning b. middle c. end d. start
- 4 obtain energy directly from the Sun.
a. Plants b. Humans c. Animals d. Insects
- 5 Which of the following represents a correct food chain?
a. Hawk → Grass → Bacteria → Rabbit → Snake.
b. Grass → Rabbit → Bacteria → Hawk → Snake.
c. Grass → Rabbit → Snake → Hawk → Bacteria.
d.
- 6 organisms increase soil fertility.
a. Producer b. Carnivore c. Herbivore d. Decomposer
- 7 All the following are considered as producer organisms, except
a. carrot b. rabbit c. grass d. cactus
- 8 Which of the following is a correct example of a food chain?
a. Mouse → Snake → Grass. b. Rabbit → Carrots → Bacteria.
c. Grass → Deer → Bacteria. d. Hawk → Fish → Algae.
- 9 Which of the following organisms could end the food chain?
a. Mouse and snake b. Rabbit and carrots
c. Grass and cactus d. Bacteria and fungi
- 10 A food chain begins with
a. decomposers b. producers c. consumers d. humans
- 11 A plant obtains energy directly from the
a. moon b. animals c. Sun d. humans
- 12 organisms are responsible for returning the organic elements to the soil.
a. Producer b. Consumer c. Decomposers d. Predators

- 13 Energy passes between living organisms through the
 a. ecosystem b. water c. air d. soil
- 14 Which of the following are decomposers?
 a. Locusts b. Hawks c. Grass d. Bacteria
- 15 All the following are considered consumer organisms, except

 a. owls b. rabbits c. algae d. grasshoppers
- 16 Energy passes from the Sun to the consumer organisms through
 organisms.
 a. predator b. producer c. decomposer d. prey

Q2

Put (✓) or (X):

- 1 The lion is a consumer organism. (✓)
- 2 Humans are the main source of energy on Earth. (X)
- 3 In the ecosystem, energy is transferred from one organism to another. (✓)
- 4 Light seeds are spread by wind. (✓)
- 5 A food chain begins with consumers. (X)
- 6 An ecosystem is several interconnected food chains. (X)
- 7 A snake is an example of a predator and prey in some food chains. (✓)

Q3

Mention the scientific term:

- 1 It is the path of energy flow from one organism to another. (Food chain)
- 2 It is a process in which the plant obtains energy. (Photosynthesis process)
- 3 It is a system consisting of living organisms and nonliving things.
(Ecosystem)
- 4 It is the main source of energy on Earth. (The Sun)
- 5 They are organisms that produce their own food. (Producers)
- 6 It is a group of different food chains that interact together. (Food web)

Q4 Complete the following sentences:

- 1 The main source of energy on the surface of the Earth is the Sun.
- 2 An ecosystem consists of living organisms and nonliving things.
- 3 Decomposers feed on the remains of dead organisms.
- 4 Humans are consumer organisms.
- 5 Energy is transferred from producers to consumers through the food chain.
- 6 An animal that feeds on another animal is called consumer.
- 7 Fish and birds are consumer organisms.
- 8 A food chain ends with decomposer organisms.
- 9 When a fox feeds on a rabbit, the rabbit is called a predator.
- 10 The interconnection of a group of food chains is known as a food web.
- 11 The food chain begins with a producer organism.
- 12 Light seeds are spread by wind.
- 13 The organisms responsible for returning organic elements to the soil are the decomposers.

Q5 Give reasons for:

- 1 Trees are considered as producers.
Because they can make their own food by the photosynthesis process.
- 2 The food web is a system of energy flow.
Because a food web consists of several interconnected food chains that show the flow of energy between living organisms.

Q6 What happens if:

- 1 Decomposers disappear?
Dead organisms will not decompose and their nutrients will not return back to the soil.
- 2 Sunlight does not reach the Earth?
Plants can't make their own food by the photosynthesis process and can't produce oxygen gas, which all living organisms need to breathe.

Q7

Answer the following:**Q1. Mention:**

- 1 One example of a decomposer organism.

Bacteria – fungi – worms – millipeds

- 2 One example of a consumer organism.

Rabbit – deer – lion – snake

- 3 One example of a producer organism.

Plants – grass – trees – carrot

- 4 The way of sticky and rough seeds dispersal.

By animal fur or human clothes

- 5 The role of decomposers in the food chain.

They decompose the dead organisms and return their nutrients back to the soil.

- 6 The importance of the earthworms to the soil.

They increase the soil fertility because they recycle nutrients to the soil.

Q2. Explain the following statements:

- a. A plant needs sunlight.

To make its own food by the photosynthesis process.

- b. A food web is an energy flow system.

Because a food web consists of several interconnected food chains that show the flow of energy between living organisms

Q3. Create food chains from the following organisms.

- a. Rabbits – Grass – Hawks – Snakes

Grass → Rabbits → Snakes → Hawks

- b. Insects – Snakes – Grass – Frogs – Hawks

Grass → Insects → Frogs → Snakes → Hawks

- c. Rabbits – Carrots – Snakes – Bacteria – Hawks

Carrots → Rabbits → Snakes → Hawks → Bacteria

- d. Mice – Grass – Hawks – Snakes

Grass → Mice → Snakes → Hawks

Concept 1.3

Q1

Choose the correct answer:

- 1 The drying up of lakes leads to a/an in the ecosystem.
a. stability b. imbalance c. strength d. balance
- 2 When the grass in the ecosystem decreases, the number of rabbits
a. increases b. is not affected c. decreases d. remains the same
- 3 Which of the following organisms begins the marine ecosystem?
a. Algae b. Mollusks c. Sharks d. Grass
- 4 A cactus is considered a organism in the desert food web.
a. producer b. consumer c. decomposer d. prey
- 5 The is created to preserve marine organisms in their ecosystem.
a. desert b. aquarium c. protected marine environment
- 6 All the following cause disruption to food webs in the desert environment, except
a. drought b. light rain c. pollution d. floods
- 7 Algae are found in the of the marine food chain.
a. beginning b. middle c. end d. last
- 8 Which of the following organisms begins the food chain in the desert environment?
a. Rabbit b. Fox c. Grass d. Algae
- 9 All the following organisms are affected by plastic materials in water, except
a. seabirds b. algae c. whales d. sea turtles
- 10 are considered homes to many fish.
a. Microorganisms b. Marine algae c. Sea turtles d. Coral reefs
- 11 is considered one of the human activities that negatively affect the marine environment.
a. Loss of algae b. Climate change
c. Throwing plastic materials into the seas
d. Recycling plastic

- 12 A food chain in the ocean begins with
 a. small fish. b. microorganisms c. sea turtles d. starfish
- 13 Overfishing leads to a/an in the number of marine organisms.
 a. increase b. growth c. decrease d. a lot of
- 14 All the following happen when the temperature of water rises in the oceans, except
 a. increased numbers of microorganisms
 b. corals get rid of algae
 c. small fish move to other areas d. coral bleaching
- 15 Microorganisms need water to survive.
 a. moderate b. cold c. hot d. warm
- 16 cause the death of marine organisms when feeding on them.
 a. Floods b. Plants
 c. Algae d. Plastic materials
- 17 The phenomenon of coral bleaching happens as a result of water temperature.
 a. rising b. moderating c. decreasing d. constant
- 18 is considered one of the causes of disruption in the marine environmental web.
 a. Habitat restoration b. Nursery
 c. Overfishing d. Heavy rain

Q2

Put (✓) or (X):

- 1 An ecosystem is affected when decomposers disappear. (✓)
- 2 A food chain in the desert environment begins with algae. (X)
- 3 The octopus is an example of a producer organism in the marine ecosystem. (X)
- 4 Heavy rain leads to a disruption in the desert ecosystem. (✓)
- 5 Coral reefs are habitats to many fish. (✓)
- 6 Loss of habitat is one of the most important causes of extinction. (✓)
- 7 Recycling plastics contributes to preserving the ecosystem. (✓)
- 8 Plastic materials have a positive effect on marine organisms. (X)

- 9 The number of living organisms decreases if climatic conditions are suitable. (X)
- 10 Human activities that occur on land effect the marine ecosystem. (✓)

Q3 Mention the scientific term:

- 1 It is the disappearance or death a species of marine organisms. (Extinction)
- 2 It is an area in the ocean where small pieces of corals are cared for. (Nursery)
- 3 They are small pieces of plastic material that are a grain of rice size. (Microplastics)

Q4 Complete the following sentences:

- 1 The absence of producers leads to the death of consumers.
- 2 Energy passes from grass to locusts in the desert environment.
- 3 When producer organisms disappear from an ecosystem, primary consumer organisms die.
- 4 The Island of Palau needs to establish a conservation program to protect its waters from pollution.
- 5 Loss of habitat is one of the most important reasons for extinction.
- 6 Seabirds depend on small fish for their food.
- 7 Marine microorganisms move to a new habitat when there is a change in the temperature of water.
- 8 Algae are considered producer organisms in the marine environment.
- 9 Sunlight causes plastic materials to break down into small particles.
- 10 Coral reefs turn white due to the increase in water temperature.

Q5 Give reasons for:

- 1 Sea turtles eat a lot of plastic materials.
Because they can't differentiate between a jellyfish and a piece of plastic.
- 2 The phenomenon of coral bleaching occurs.
When water temperature rises, coral reefs get rid of algae and their color turns completely white.

Q6 What happens if:

- 1 Drought occurs in an ecosystem?

The ecosystem may be destroyed because plants will die and also primary consumers will die.

- 2 Grass disappears from the desert ecosystem?

Primary consumers will move to another place to search for food or they will die.

- 3 The water temperature increases for microorganisms?

Microorganisms will move to cooler water along with small fish.

- 4 The amount of plastic materials in the marine environment increases?

Plastic will harm organisms that live in water, such as whales, sea turtles, and corals.

- 5 Living organisms cannot adapt to climate changes?

Living organisms will move to another habitat or they will die (their population will decrease.)

Q7 Answer the following questions**Q1. Mention:**

- 1 Some methods that are used to reduce pollution of the marine environment with plastic materials.

1. Decreasing the use of plastic products

2. Recycling plastic products

- 2 One of the causes of habitat loss.

- Building more buildings and roads

- Throwing waste materials in water

- Overfishing

- 3 The importance of the nursery.

Scientists take care of corals until they grow and can be moved back to the reefs.

Q2. Create a food chain from the following organisms:

- Sea urchins – Sharks – Algae – Parrotfish

Algae → Sea urchins → Parrotfish → Sharks

Concept 2.1

Q1

Choose the correct answer:

- 1 Which of the following substances consists of particles that are closely connected to each other?
a. Helium gas b. Wood c. Water vapor d. Cooking oil
- 2 The matter consists of a group of
a. organs b. devices c. gases d. particles
- 3 The atmospheric air is considered a matter.
a. solid b. frozen c. liquid d. gaseous
- 4 Which of the following is not considered a matter?
a. Wood b. Air c. Light d. Water
- 5 Pens and rulers are examples of matter.
a. solid b. liquid
c. gaseous d. all the previous
- 6 The particles of matter are very close to each other in the state of
a. oxygen b. water c. oil d. iron
- 7 Water is found in nature in states.
a. three b. four c. five d. six
- 8 Everything that has mass and occupies space is called
a. volume b. state c. matter d. mass
- 9 The distances between the particles of a gaseous matter are the distances between the particles of a liquid matter.
a. double b. greater than c. equal to d. smaller than
- 10 The is considered a similar copy to the real thing to illustrate its shape or the way it works.
a. energy b. particle c. model d. matter
- 11 A matter has a fixed volume and a variable shape.
a. solid b. liquid c. frozen d. gaseous
- 12 Which of the following consists of particles that are interconnected and very close together?
a. Edible oil b. Water vapor c. Helium d. Wood

- 13 The movement of water particles is slower than the movement of
 a. oil b. cars c. **hydrogen** d. juice
- 14 The steam rising from food is an example of a state.
 a. solid b. liquid c. **gaseous** d. frozen
- 15 Which of the following substances can be poured?
 a. Salt b. Water vapor c. **Milk** d. Air

Q2**Put (✓) or (X):**

- 1 Sound is a form of energy. (✓)
- 2 Ice turns into a liquid by cooling. (X)
- 3 A gaseous matter does not occupy space. (X)
- 4 Milk has a fixed shape whatever the shape of the container is. (X)
- 5 The same substance can exist in nature in more than one state. (✓)
- 6 When we press on a balloon, its volume increases. (X)
- 7 Models help us understand how things work. (✓)
- 8 The particles of solid matter spread very quickly. (X)
- 9 Germs can be seen with the naked eye. (X)
- 10 Solids, liquids, and gases have a specific shape in common. (X)
- 11 A gaseous matter has a fixed volume and an unstable shape. (X)

Q3**Mention the type of each of the following matters:**

Oil – Book – Apple – Water vapor – Table – Ruler – Helium – Tree – Vinegar

Solid: Book – Apple – Table – Ruler – Tree

Liquid: Oil – Vinegar

Gas: Water vapor – Helium

Q4**Write what the following statements mean:**

- 1 It is the amount of space occupied by a body. (**Volume**)
- 2 It is a matter whose particles are not interconnected and move completely freely. (**Gas**)
- 3 They are the small units that make up matter. (**Particles**)
- 4 It is the state of water after freezing. (**Solid state**)

- 5 It is a copy of something to show what it looks like or how it works.
(Model)
- 6 It is a state of matter whose shape is variable and volume is constant.
(Liquid)
- 7 They are the building units of matter.
(Particles)

Q5

Complete the following sentences:

- 1 Matter can exist in 3 states.
- 2 Matter can be poured in the liquid state.
- 3 Sound is considered a form of energy.
- 4 Everything that has mass and occupies space is called matter.
- 5 Water can exist in a solid state in the form of ice.
- 6 The particles of matter are very close together in solid matter.
- 7 The particles of a gaseous matter spread very quickly.
- 8 A liquid matter can be poured, but a solid matter cannot be poured.
- 9 A pen is an example of a solid matter.
- 10 The liquid state of water changes when it is heated or cooled.
- 11 Matter consists of small units called particles.
- 12 Gases have no definite shape and volume.
- 13 A solid matter has a fixed shape and volume.
- 14 The shape of a gaseous matter and its volume are variable.

Q6

Mention the importance of:

- 1 Earth model.
 - To know the shape of Earth
 - To know how much of Earth is covered with water
 - To know where different countries are located
- 2 Solar system model.
 - It helps us see all planets at once.
 - It helps us compare between planets, knowing which one is the biggest, and which one is the closest to Earth.

Q7 Compare between:

- The solid, liquid, and gaseous states in terms of:

* The arrangement of particles

* Strength of the bond between them

P.O.C	Solid	Liquid	Gaseous
Arrangement of Particles	Regular pattern (organized) Very close to each other	Not well-organized	Random arrangement (Not organized at all)
Strength of Bond	Strong	Moderate	Weak

Q8 Give reasons for:

- 1 Vinegar takes the shape of the container that it is placed in.

Because it is liquid and its particles slide over each other.

- 2 Oxygen has an indefinite shape and volume.

Because oxygen is a gas.

- 3 The cup has a definite shape and volume.

Because a cup is solid matter

Q9 What happens if:

- 1 You put a bottle of water in the freezer?

It freezes (changes from a liquid state to a solid state).

- 2 You expose a piece of ice to the Sun for a long time?

It changes from a solid state to a liquid state.

- 3 Water is exposed to a high temperature?

Water changes from a liquid state to a gaseous state (water vapor).

- 4 You press on an inflated balloon?

Its volume decreases, and the particles of air inside it get closer.

- 5 Water is exposed to a low temperature?

It freezes (water changes from a liquid state to a solid state (ice)).

Concept 2.2

Choose the correct answer:

- 1 We use the unit to measure the mass of the body.
a. liter
b. kilogram
c. meter
d. cubic centimeter
- 2 All the following are chemical properties of matter, except
a. burning
b. combustion
c. color
d. rust
- 3 We use a to measure temperature.
a. ruler
b. thermometer
c. measuring cup
d. common balance
- 4 The amount of matter that the body contains is known as
a. volume
b. temperature
c. mass
d. length
- 5 A tape measure is used to measure the
a. temperature
b. weight
c. volume
d. length
- 6 The is known as the space occupied by a body.
a. mass
b. volume
c. length
d. temperature
- 7 We use a to measure the mass of a book.
a. measuring cup
b. measuring tape
c. common balance
d. thermometer
- 8 The is considered one of the chemical properties of matter.
a. color of apples
b. smell of vinegar
c. burning of a paper
d. color of gold
- 9 5 liters = cm^3
a. 0.5
b. 50
c. 500
d. 5,000
- 10 is used in making car tires.
a. Copper
b. Helium
c. Rubber
d. Glass
- 11 floats above the surface of water.
a. Iron
b. Aluminum
c. Wood
d. Copper
- 12 Which of the following properties of matter cannot be measured?
a. Length
b. Mass
c. Taste
d. Volume

- 13 is considered one of the matters that are attracted to magnets.
 a. Plastic b. Wood c. Iron d. Cork
- 14 is used to make medical glasses.
 a. Helium b. Glass c. Rubber d. Iron
- 15 A is used to measure the volume of a matter.
 a. common balance b. measuring tape
 c. measuring cup d. thermometer
- 16 All the following describe the physical properties of matter, except the
 a. texture b. taste c. iron rust d. color
- 17 All the following are units of mass measurement, except
 a. tons b. grams c. liters d. kilograms

Q2

Put (✓) or (X):

- 1 The shapes of houses vary from one environment to another. (✓)
- 2 A ruler is used to measure the mass of objects. (X)
- 3 The texture of the fabric is one of the chemical properties of the matter. (X)
- 4 Iron rust is considered a physical change in the matter. (X)
- 5 Temperature expresses the speed of particles movement in the matter. (✓)
- 6 It is possible to distinguish between iron and gold using the sense of smell. (X)
- 7 Balloons are filled with helium gas. (✓)
- 8 Wood is a good conductor of electricity. (X)
- 9 A measuring cup is used to measure the temperature. (X)
- 10 The mass of matter changes from one state to another. (X)
- 11 Shape and volume are physical properties of matter. (✓)
- 12 The roof of a desert house is similar to the roof of a house in a tropical forest. (X)

Q3 Write what the following statements mean:

- 1 It is a non-toxic material used to fill air balloons. (Helium gas)
- 2 It is the ability of a material to transfer electricity and heat through it. (Conduction)
- 3 They are the properties that can be observed using the five senses. (Physical properties)

Q4 Complete the following sentences:

- 1 The volume of matter is measured by a measuring cup.
- 2 The length of a classroom can be measured by meters unit.
- 3 3 kilograms = 3,000 grams.
- 4 Iron rust is an example of the chemical properties of a matter.
- 5 Color, taste, and smell are the physical properties of a matter.
- 6 A measuring cup is used to measure the volume of a matter.
- 7 Helium gas is used to fill balloons.
- 8 Copper is used to make electrical wires because it is a good conductor of electricity.
- 9 Copper is used to make cooking utensils.
- 10 The roof of the house is sloping in places with cold weather.
- 11 Thermal conduction is one of the physical properties of matter.
- 12 The roof of the house is flat in places with hot weather.

Q5 Mention one of the uses of:

- 1 Copper: **Copper is used in making electric wires and cooking pans.**
- 2 Helium: **Helium is used to fill up balloons and blimps.**
- 3 Glass: **Glass is used in making eyeglasses and electric lamps.**

Q6 Give reasons for:

- 1 Cookware handles are made of plastic not metal.
Because plastic is a bad conductor of heat, and metal is a good conductor of heat.

- 2 Glass is used to make electric lamps.

Because it is transparent and smooth.

- 3 Wood is not used to make electrical wires.

Because wood is a bad conductor of electricity.

Q7

What happens if:

- 1 The particles of the matter are interconnected and close in relation to their density?

Its density increases.

- 2 The density of the substance is greater than the density of the liquid?

It sinks in liquid.

- 3 The density of the matter is less than the density of the liquid?

It floats on liquid.

Concept

2.3

Q1

Choose the correct answer:

- 1 The mass of ice after melting is its mass before melting.
a. double b. greater than c. equal to d. less than
- 2 When water is placed in the freezer, it turns into ice as a result of
a. melting b. freezing c. filtration d. evaporation
- 3 The process of freezing is the reverse process of
a. boiling b. melting c. condensation d. evaporation
- 4 Examples of physical processes include
a. iron rusting b. wood burning
c. paper burning d. making a fruit salad
- 5 Liquid chocolate can be returned into its solid state by
a. heating b. cooling c. evaporation d. condensation
- 6 The speed of particles movement increases in the process of
a. freezing b. melting c. condensation d. cooling
- 7 The components of a mixture of sand and water are separated by
a. filtration b. evaporation
c. cooling d. filtration and cooling
- 8 Condensation is the change of matter from the state to the liquid state.
a. solid b. gaseous c. physical d. chemical
- 9 A chemical change occurs when a paper.
a. bending b. cutting c. burning d. grinding
- 10 The melting of wax is considered a/an change.
a. environmental b. chemical c. organic d. physical
- 11 is considered a physical change.
a. Bread making b. Rock crushing c. Iron rust d. Wood burning

- 12 The mass of a mixture before mixing is its mass after mixing.
 a. greater than b. equal to c. smaller than d. double
- 13 What is the correct order of water desalination steps?
 a. Evaporation – Filtration – Condensation
 b. Condensation – Filtration – Evaporation
 c. Filtration – Evaporation – Condensation
 d. Evaporation – Condensation – Filtration
- 14 All the following are physical changes, except
 a. cutting vegetables b. burning a paper
 c. cutting cloth d. melting ice
- 15 The formation of copper into wires is a/an change.
 a. thermal b. chemical
 c. environmental d. physical
- 16 All the following are chemical changes of matter, except
 a. burning wood b. cutting fruits c. food digestion d. iron rust

Q2

Put (✓) or (X):

- 1 Heat is a form of matter. (X)
- 2 Melting is the transformation of ice into water. (✓)
- 3 A mixture consists of only one substance. (X)
- 4 Changing the temperature affects the shape and mass of matter. (X)
- 5 When a liquid matter is heated, it turns into a solid state. (X)
- 6 Separating mixtures by evaporation requires raising the temperature. (✓)
- 7 Grinding sugar is considered a physical change. (✓)
- 8 The change in the state of water from a solid to a liquid is a chemical change. (X)
- 9 A physical change is a change in the form of matter only. (✓)
- 10 The formation of rust on an iron nail is an evidence of chemical change. (✓)
- 11 Salty sea water becomes drinkable after the filtration stage. (X)
- 12 Melting of wax produces a new substance, so this is considered a chemical change. (X)

Q3

Write what the following statements mean:

- 1 It is the process of changing matter from a solid state to a liquid state by raising the temperature. (Melting)
- 2 It is the process of changing matter from a gaseous state to a liquid state. (Condensation)
- 3 It consists of two or more mixed substances that can be easily separated. (Mixture)
- 4 It is a red chemical crust resulting from the reaction of iron with oxygen. (Rust)
- 5 It is a change in the shape, size, and state of matter. (Physical change)
- 6 It is a change in the composition of matter and a new substance is produced. (Chemical change)

Q4

Complete the following sentences:

- 1 Water turns into steam as a result of gaining thermal energy.
- 2 A compound consists of two or more substances combined chemically.
- 3 The movement of matter particles increases when the temperature of the matter increases.
- 4 The change of matter from a gaseous state to a liquid state is called condensation.
- 5 A mixture of a solid dissolved in water is separated by evaporation.
- 6 The mixture consists of two or more substances that are not chemically combined.
- 7 A matter changes from a solid state to a liquid state when it gains thermal energy.
- 8 Heat is one of the forms of energy.
- 9 The transformation of ice into water is considered a physical change.
- 10 Physical changes do not change the composition of matter.
- 11 Salty sea water becomes drinkable after the evaporation stage.
- 12 The formation of gas bubbles when mixing an amount of vinegar with baking soda is an evidence of a chemical change in the matter.

- 13 Forming copper into wire is considered a **physical** change.
- 14 Digestion of food within the body's cells is a **chemical** change.
- 15 Melting a piece of butter is a **physical** change.

Q5 Classify the change that occurs:

- | | |
|-----------------|-----------------|
| 1 Wax melting | Physical change |
| 2 Cloth bending | Physical change |
| 3 Wood burning | Chemical change |

Q6 What is meant by:

- 1 Freezing
It is the change of matter from a liquid state to a solid state by cooling.
- 2 Melting
It is the change of matter from a solid state to a liquid state by heating.
- 3 Condensation
It is the change of matter from a gaseous state to a liquid state by cooling.

Q7 Give reasons for:

- 1 Heat is not a matter.
Because it is a form of energy. it doesn't have mass and volume.
- 2 The Earth's atmosphere is a mixture.
Because it is formed of different gases: oxygen, nitrogen, and carbon dioxide.
- 3 Melting is a physical change.
Because the matter changes without any change in its properties.
- 4 Burning wood is a chemical change.
Because wood changes into ash (a new substance with different properties).
- 5 Dissolving sugar in water is a physical change.
Because there is no change in the structure of the sugar.

Q8

What happens:

- 1 To the mass of a matter when heated or cooled?

The mass does not change.

- 2 When we place a piece of ice in the Sun for a long period of time?

The ice melts and changes to water, then water evaporates and changes into water vapor.

- 3 When water is cooled to a temperature below zero degrees Celsius?

It will freeze (change from liquid state to solid state)

- 4 When we mix vinegar and baking soda?

Gas bubbles are formed (chemical change).

- 5 When iron is left in the air without coating.

It rusts (a layer with reddish color).

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الاول





First term Questions Bank



Question 01

Choose the correct answer

- 1 Blood rich in oxygen moves inside the body from the heart to the body's organs through.....
 (a) arteries (b) veins (c) phloem
- 2 The..... absorb water and salts from the soil.
 (a) stem (b) leaves (c) root
- 3 Potato plant has stem.
 (a) upright (b) climb (c) tuber
- 4 Which of the following substances consists of particles that are closely connected to each other?
 (a) Helium gas (b) Wood (c) Cooking oil
- 5 In the process of photosynthesis, light energy is converted into energy.
 (a) gravity (b) thermal (c) chemical
- 6 is one of the basic needs of the plant.
 (a) Soil (b) Air (c) Oxygen
- 7 The matter consists of a group of
 (a) organs (b) devices (c) particles
- 8 Root hairs help inthe amount of water that the plant can take from the soil.
 (a) Increasing (b) decreasing (c) no change
- 9 The process of transporting seeds from one place to another is called
 (a) seed germination (b) transpiration (c) seed dispersal
- 10 The atmospheric air is considered a matter.
 (a) solid (b) frozen (c) gaseous



- 11 Thedelivers water and salts from the root to the plant leaves.
 (a) stem (b) leaves (c) root
- 12 All of the following are considered as consumers organisms except.....
 (a) owl (b) rabbit (c) algae
- 13 Which of the following is not considered a matter?
 (a) Wood (b) Air (c) Light
- 14 The organisms are responsible for returning the organic elements to the soil.
 (a) producers (b) consumers (c) decomposers
- 15 Blood rich in carbon dioxide returns to the heart through
 (a) veins (b) arteries (c) phloem
- 16 The process of photosynthesis occurs in
 (a) stem (b) flowers (c) leaves
- 17 The human transportation system is called system.
 (a) digestive (b) circulatory (c) respiratory
- 18 Pen and ruler are examples of matter
 (a) solid (b) Liquid (c) Gaseous
- 19 The needs of plant and animal are similar in all of the following except
 (a) water (b) air (c) method of obtaining food
- 20 The plant absorbs gas during the process of photosynthesis.
 (a) oxygen (b) carbon dioxide (c) Nitrogen
- 21 The plant makes its food, which is through the process of photosynthesis.
 (a) sugar (b) protein (c) seeds
- 22 The food chain begins with
 (a) decomposers (b) Producers (c) consumers
- 23 The particles of matter are very close to each other in the state of
 (a) oxygen (b) Water (c) Iron



- 24 Phloem vessels carry glucose down from to the rest of the plant parts .
- (a) leaves (b) stems (c) Roots
- 25 The is considered as an organ of the circulatory system.
- (a) skin (b) heart (c) Brain
- 26 The plant obtains energy directly from the
- (a) moon (b) animal (c) Sun
- 27 During photosynthesis, plants release into the air so that we can breathe
- (a) carbon dioxide (b) oxygen (c) Sugar
- 28 Which of the following organisms could end the food chain?
- (a) Mouse and snake (b) Rabbit and carrots (c) Bacteria and fungi
- 29 The heart consists of..... chambers.
- (a) three (b) four (c) Five
- 30 Xylem vessels are tubes that allow water to move from the roots to other parts of the plant.
- (a) up (b) down (c) in its place
- 31 Among the non-living components of the ecosystem
- (a) Animal (b) Plant (c) Soil
- 32 A component within a plant that absorbs sunlight during photosynthesis.
- (a) Green chlorophyll (b) Stomata (c) Xylem
- 33 All of the following are considered as producer organisms except.....
- (a) carrot (b) rabbit (c) grass
- 34 Water is found in nature in states.
- (a) three (b) Four (c) Five
- 35 Fungi and bacteria are found in the of the food chain.
- (a) beginning (b) middle (c) end
- 36 Air passes through small openings in the leaves of the plant called
- (a) stomata (b) green chlorophyll (c) xylem



- 37 Energy passes from the sun to the consumers organisms through organisms.
- (a) predators (b) Producer (c) decomposers
- 38 The potato plant is known to have a stem that extends underground.
- (a) tuber (b) extension (c) climber
- 39 Everything that has mass and occupies space is called
- (a) volume (b) State (c) matter
- 40 The obtains energy directly from the sun.
- (a) plant (b) human (c) animal
- 41 The food chain starts with the source of energy which is
- (a) oxygen (b) Sun (c) Moon
- 42 Among the organisms that produce food.....
- (a) Animal (b) Plant (c) Soil
- 43 The organisms increase soil fertility.
- (a) producer (b) carnivore (c) decomposer
- 44 The distances between the particles of a gaseous matter are the distances between the particles of a liquid matter.
- (a) double (b) greater than (c) smaller than
- 45 We use the unit to measure the mass of the body.
- (a) liter (b) kilogram (c) meter
- 46 All of the following are chemical properties of matter except
- (a) burn (b) color (c) Rust
- 47 The is considered a similar copy to the real thing to illustrate its shape or the way of its work.
- (a) energy (b) particle (c) model
- 48 We use to measure temperature.
- (a) ruler (b) thermometer (c) measuring cup
- 49 Which of the following properties of matter cannot be measured?
- (a) Length (b) Mass (c) Taste



- 50 The matter has a fixed volume and a variable shape.
 (a) solid (b) liquid (c) frozen
- 51 The amount of the matter that the body contained is known as
 (a) volume (b) temperature (c) mass
- 52 All of the following are units of mass measurement except
 (a) tons (b) grams (c) liters
- 53 A tape measure is used to measure
 (a) temperature (b) weight (c) length
- 54 The movement of water particles is slower than the movement of
 (a) oil (b) car (c) hydrogen
- 55 The is known as the space that occupied by a body.
 (a) mass (b) volume (c) length
- 56 Steam rising from food is an example of a state.
 (a) solid (b) liquid (c) gaseous
- 57 We use to measure the mass of a book
 (a) measuring cup (b) common balance (c) thermometer
- 58 Which of the following substances can be poured?
 (a) salt (b) water vapor (c) milk
- 59 is considered one of the matters that are attracted to magnets.
 (a) Plastic (b) Iron (c) Cork
- 60 The is considered one of the chemical properties of matter.
 (a) color of apples (b) smell of vinegar (c) burning of the paper
- 61 5 liters = cm^3
 (a) 0.5 (b) 500 (c) 5000
- 62 All of the following describe the physical properties of matter except
 (a) Taste (b) Iron rust (c) Color
- 63 is used in making car tires.
 (a) Copper (b) Rubber (c) Glass



- 64 floats above the surface of the water.
 (a) Iron (b) Aluminum (c) Wood
- 65 The system transports food and oxygen in humans.
 (a) nervous (b) digestive (c) circulatory
- 66 The is considered one of the causes of disruption in the marine environmental web.
 (a) habitat restoration (b) overfishing (c) recycling of plastic materials
- 67 The causes the death of marine organisms when feeding on them.
 (a) fish (b) plants (c) plastic materials
- 68 When the grass in the ecosystem decreases, the number of rabbits
 (a) increases (b) is not affected (c) decreases
- 69 Overfishing leads to the number of marine organisms.
 (a) increase (b) growth (c) decrease
- 70 The photosynthesis process takes place in
 (a) stems (b) flowers (c) leaves
- 71 The are considered a home to many fish.
 (a) microorganisms (b) sea turtles (c) coral reefs
- 72 All of the following cause disruption to food webs in the desert environment except.....
 (a) drought (b) light rain (c) pollution
- 73 The drying up of lakes leads to..... the ecosystem.
 (a) stability (b) imbalance (c) strength
- 74 The measuring unit of volume
 (a) cm (b) cm³ (c) Kg
- 75 If the climate is suitable, the population of a species will
 (a) increase (b) decrease (c) die
- 76 If the amount of grass increases, this directly increases number of
 (a) hawks (b) rabbits (c) caracals



- 77 Plants needand that helps them make photosynthesis process.
- a sunlight – carbon dioxide b sunlight – oxygen c oxygen – nutrients
- 78 Oil takes the of its container.
- a shape b colour c mass
- 79 Steel is used in making hammers because it is
- a flexible b transparent c hard
- 80 Ice can turn into water by
- a heating b rusting c freezing
- 81 The phenomenon of coral bleaching happens as a result ofwater temperature.
- a rising b moderating c decreasing
- 82 If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will
- a increase b decrease c die
- 83 To examine the structure of tiny particles of a matter, we can use
- a thermometer b balance c microscope
- 84 Maple seeds travel by wind, because they areseeds.
- a light b spiny c heavy
- 85 A state of matter that has definite shape and definite volume is
- a solid b liquid c gas
- 86 Flowers produce for reproduction
- a leaves b stems c seeds
- 87 The used material in making the body of cooking pans is
- a copper b glass c wood
- 88 To separate sand from water, we can useprocess.
- a filtration b evaporation c melting



- 89 Living organisms that decay dead organisms are called
- a producers b primary consumers c decomposers
- 90 Plants use during photosynthesis process.
- a nitrogen b oxygen c carbon dioxide
- 91 When coral the seawater, they may ingest microplastics.
- a evaporate b filter c cool
- 92 To see the components of one blood cell, we need
- a electron microscope b Scale c measuring tape
- 93are pores on the surface of plant's leaves that allow gases to move into and out of the plant.
- a Stomata b Xylem c Phloem
- 94 The microorganisms need water to survive.
- a hot water b warm water c cold water
- 95 An example of a gas is
- a chocolate b oxygen c pencil
- 96 Food moves from the leaves to the other parts of the plant throughtubes.
- a stomata b roots c phloem
- 97 The final link in any food chain is the
- a consumer b producer c decomposer
- 98 The if used to make electrical wires due to its properties.
- a glass b copper c helium
- 99 The gas that produced from photosynthesis process is
- a carbon dioxide b oxygen c nitrogen
- 100 The marine food web usually starts with
- a clam b zooplankton c algae



- 101 Burning of fuel in cars is considered as change of matter.
 (a) chemical (b) physical (c) physical and chemical
- 102 All the following factors pollute the water, except
 (a) plastic garbage (b) animals' wastes (c) sunlight
- 103 carry blood that is rich in oxygen and glucose from the heart to the body cells.
 (a) Veins (b) Lungs (c) Arteries
- 104 In a food chain the energy transfers from
 (a) a predator to a prey (b) a prey to a predator (c) a predator to a producer
- 105 All the following happen to the particles of oil when it is cooled, except that they
 (a) move slower (b) move faster (c) vibrate less
- 106 The physical property of milk that you can see is the of it.
 (a) odour (b) texture (c) colour
- 107 Decomposers alwaysthe soil.
 (a) pollute (b) damage (c) benefit
- 108 Salt can be separated by of salty water.
 (a) melting (b) evaporation (c) freezing
- 109 Potato plant has stem.
 (a) upright (b) climb (c) tuber

Question 02

put (true) or (false)

- 1 Blood moves in the arteries and veins in two directions. ()
- 2 Roots absorb light from sun. ()
- 3 The lion is a consumer organism ()
- 4 Plant and human do not depend on themselves to obtain food ()
- 5 Plants that grow away from sunlight are green. ()



- 6 Soil is considered a basic need for plant growth ()
- 7 The ecosystem is affected when decomposers disappear. ()
- 8 Humans are the main source of energy on Earth ()
- 9 The plant uses natural resources to grow and flourish ()
- 10 Coral reefs are habitat to many fish. ()
- 11 An ecosystem is several interconnected of the food chains with each other ()
- 12 In the ecosystem, energy is transferred from one organism to another ()
- 13 Photosynthesis occurs in plant seeds. ()
- 14 The food chain begins with consumers ()
- 15 The octopus is an example of a productive organism in the marine ecosystem. ()
- 16 Chlorophyll gives the plant its distinctive green color. ()
- 17 Recycling of plastic contributes to preserving the ecosystem ()
- 18 The xylem carry glucose from the leaves to the rest of the plant. ()
- 19 Light seeds are spread by the wind. ()
- 20 The food web is a group of interconnected food chains ()
- 21 The plant does not need sunlight in the process of photosynthesis. ()
- 22 Milk has a fixed shape whatever the shape of the container is different ()
- 23 The snake is an example of a predator and prey in some food chains. ()
- 24 The food chain in the desert environment begins with algae ()
- 25 The number of living organisms decreases if climatic conditions are suitable ()
- 26 The arteries and veins in the human body are similar to the vessels of xylem and phloem in transporting water and food ()
- 27 Ice turns into a liquid by cooling ()
- 28 Plastic materials have a positive effect on marine organisms ()



- 29 Heavy rain leads to disruption in the desert ecosystem. ()
- 30 Sound is a form of energy ()
- 31 Gaseous matter does not occupy space. ()
- 32 Loss of habitat is most important causes of extinction ()
- 33 The same substance can exist in nature in more than one state ()
- 34 Human activities that occur on land effect on marine ecosystem ()
- 35 Photosynthesis process occurs in the roots of plants. ()
- 36 Habitat loss is one of the most important causes of extinction. ()
- 37 When we press on a balloon, its volume increases. ()
- 38 Germs can be seen with the naked eye. ()
- 39 Models help understand how things work. ()
- 40 Solids, liquids, and gases have a specific shape in common. ()
- 41 Particles of solid matter spread very quickly. ()
- 42 A gaseous matter has a fixed volume and an unstable shape. ()
- 43 Balloons are filled with helium gas. ()
- 44 A ruler is used to measure the mass of objects ()
- 45 The shape of houses varies from one environment to another. ()
- 46 The texture of the fabric is one of the chemical properties of the matter. ()
- 47 The roof of a desert house is similar to the roof of a house in a tropical forest. ()
- 48 Temperature expresses the speed of particles movement of matter ()
- 49 Shape and volume are physical properties of matter. ()
- 50 Wood is a good conductor of electricity ()
- 51 Iron rust is considered a physical change in the matter. ()
- 52 A measuring cup is used to measure temperature. ()



- 53 The mass of matter changes from one state to another ()
- 54 Metal rusts due to chemical changes that occur to the material. ()
- 55 Coral bleaching has a positive impact on coral reefs. ()
- 56 Cutting wood into pieces changes its mass and colour. ()
- 57 A flower is a reproductive part of the plant. ()
- 58 Stomata allow gases to move into and out of the plant. ()
- 59 Coconut seeds disperse by wind. ()
- 60 All matter are made up of tiny particles. ()
- 61 Roots fix the plant in the soil. ()
- 62 Blood moves only in one direction in human's veins. ()
- 63 Healthy habitats provide living organisms with clean air, healthy food and water. ()
- 64 If coral reefs are destroyed, many marine food chains will destroy ()
- 65 Producers need consumers to live and grow ()
- 66 Plants stems absorb oxygen from the air. ()
- 67 Desalination process contains filtration process only. ()
- 68 The first link in any food chain is a consumer. ()
- 69 Iron spoon is attracted to the magnet ()
- 70 Handles of cooking pans are made up of wood or plastic. ()
- 71 The roof of desert home is similar to rainforest home. ()
- 72 When the matter gains more energy, it can change to different states ()
- 73 Producers form their own food, while decomposers return nutrients back to the ecosystem. ()
- 74 Green plants can grow well in a dark room. ()
- 75 If the masses of two different materials are equal, so their volume must be equal. ()
- 76 Xylem is important for plants to transfer water from roots to leaves. ()



- 77 Coral reefs bleaching occur when temperature of seawater decreases. ()
- 78 Liquid particles move faster than solid particles. ()
- 79 Thermometer is used to measure the length of a book ()
- 80 Helium takes the shape and the volume of its container ()

Question 03

Complete the following sentences

- 1 The transport system in plants is similar to system in humans.
- 2 The plant gets and from the soil.
- 3 The feed on the remains of dead organisms.
- 4 The help the plant get water from the soil.
- 5 Fish and birds are organisms
- 6 The energy source of plant is sugar.
- 7 Energy is transferred from to consumers through the food chain
- 8 Light energy in the plant is converted into energy in photosynthesis process.
- 9 The organisms responsible for returning organic elements to the soil are the
- 10 The plant needs, water and sunlight to carry out of photosynthesis process.
- 11 The island of Palau needs to establish a to protect its waters from pollution.
- 12 Plant cells depend on as a source of energy and growth.
- 13 The interconnection of a group of food chains is known
- 14 The process of is the production of new individuals of the same species.
- 15 Coconut seeds are transmitted by
- 16 Loss of habitat is one of the most important reasons for



- 17 The gas is produced through the process of photosynthesis and humans used it for breathing.
- 18 The organisms help in soil fertility.
- 19 The main source of energy on the surface of the Earth is
- 20 The food chain begins with a organism.
- 21 The ecosystem consists of and non-living things.
- 22 Light seeds are spread by
- 23 The absence of producers leads to the of consumers.
- 24 Matter can be poured in the state
- 25 When producers organisms disappear from an ecosystem, organisms die.
- 26 Algae are considered organisms in the marine environment
- 27 The carry oxygen from the heart to all body parts.
- 28 Seabirds depend on for their food.
- 29 Matter can exist in states.
- 30 Matter consists of small units called
- 31 is used to measure the volume of a matter.
- 32 is used to make electrical wires.
- 33 gas is used to fill balloons.
- 34 is used to make the electrical wires because it is a good conductor of electricity.
- 35 causes plastic materials to break down into small particles.
- 36 In the plant, water moves from the roots to the leaves through
- 37 Coral reefs turned to white due to water temperature.
- 38 The shape of the matter and its volume are variable.
- 39 Sound is considered a form of



- 40 Everything that has mass and occupies space is called
- 41 Color, taste and smell are the properties of a matter.
- 42 The length of the classroom can be measured by unit.
- 43 Thermal conduction is one of the properties of the matter.
- 44 Iron rust is an example of a properties change of a matter.
- 45 3 kilograms = grams.
- 46 is used to make cooking utensils.
- 47 Water can exist in a solid state in the form of
- 48 Particles of matter spread very quickly.
- 49 The of matter is measured by a measuring cup.
- 50 The matter can be poured but the solid matter cannot be poured.
- 51 When a certain type of predator disappears from the ecosystem, the numbers of preys are
- 52 The state of water changes when it is heated or cooled.
- 53 Wood on the water.
- 54 We can use gas to fill blimps because it is than air.
- 55 Sea cannot differentiate between a jellyfish and a piece of in the water.
- 56 Veins carry blood that contains..... from body parts to
- 57 Changing water from solid state to liquid state is called while changing water from gaseous state to liquid state is called
- 58 is a gas produced during photosynthesis process.
- 59 is a copy that is similar to real thing that shows what it looks like or works like.
- 60 Bacteria and fungi are two examples of
- 61 An example of liquid is
- 62 When ice is melted it changed from state to state.



- 63 There are three types of vessels in the human circulatory system which are and blood capillaries.
- 64 Plants produce and during photosynthesis process.
- 65 and take the shape of their containers.
- 66 The system transports nutrients and oxygen to cells and organs in human.
- 67 The tubes that carry food from leaves to all plant parts are called
- 68 Iron rusting is from the changes of matter.
- 69 is from human activity that harm marine ecosystem.
- 70 Odor and texture are from properties of matter.
- 71 The freezing point of water is
- 72 Trees and other plants make food through process.
- 73 From properties of glass is that it is
- 74 Water is the matter in state, while water vapour is state.
- 75 We can separate sand from water by process and salt from water by process.
- 76 Travelling by wind and floating on water are from ways of
- 77 The potato stems extend underground and called
- 78 are the producers in the marine food web.
- 79 Mixing baking soda with vinegar is an example of changes.
- 80 Microorganisms are found in water habitats.

Question 04

write scientific term for each of the following

- 1 Stems that extend horizontally on the surface of the earth and help in the formation of new plants such as strawberry plant. ()
- 2 Small openings (holes) in the leaves of the plant through which air passes ()
- 3 A process that occurs inside the leaves of the plant to make its food. ()



- ④ Thick and solid stems such as the roots of trees and shrubs ()
- ⑤ A substance responsible for the green color of the plant ()
- ⑥ Vessels in the plant which are responsible for transporting nutrients from the leaves to all parts of the plant. ()
- ⑦ Vessels that transport water and nutrients from the roots to the parts of the plant. ()
- ⑧ Vessels that transport blood rich in carbon dioxide and a little oxygen and nutrients from parts of the body to the heart. ()
- ⑨ They are small, dark parts located in the middle of flower ()
- ⑩ The reproductive parts of the plant. ()
- ⑪ Transferring seeds from one place to another. ()
- ⑫ A group of vessels that transport important nutrients in one direction between parts of the plant ()
- ⑬ The path of energy flow from one organism to another ()
- ⑭ A process in which the plant obtains energy. ()
- ⑮ A system consisting of living organisms and non-living things. ()
- ⑯ The main source of energy on Earth. ()
- ⑰ A group of food chains interacted with each other ()
- ⑱ The properties that can be observed using the five senses. ()
- ⑲ Organisms that produce their own food. ()
- ⑳ An area in the ocean where small pieces of coral are cared. ()
- ㉑ The disappearance or death of one of a species of marine organisms. ()
- ㉒ Small pieces of plastic materials are a grain of rice sized. ()
- ㉓ The amount of space occupied by a body. ()
- ㉔ A matter whose particles are not interconnected and move completely freely. ()



- 25 The small units that make up matter ()
- 26 A copy of something to show what it looks like or how it works. ()
- 27 A non-toxic material used to fill air balloons. ()
- 28 The ability of a material to transfer electricity and heat through it. ()
- 29 It is a process of removing salt from water. ()
- 30 Process in which the matter changes from solid state to liquid state by heating. ()
- 31 They are consumers which feed on secondary consumers. ()
- 32 Anything that has a mass and takes up a space. ()
- 33 The tool used to measure the length of a wall. ()
- 34 A part of the plant that carries water and nutrients from the roots to the leaves. ()
- 35 It is a matter that is formed from combine two or more materials chemically. ()
- 36 The gas that is produced from photosynthesis process. ()
- 37 They are organisms that break down dead bodies ()
- 38 It is the number of organisms of one type of species living in an area. ()
- 39 The liquid substance that plants, animals and human need to survive. ()
- 40 The gas that plant needs to make photosynthesis process ()
- 41 It is the final link in a food chain. ()
- 42 Flying living organisms that build their nests on the top of mountain cliffs and dive deeply into the sea to eat. ()
- 43 The process of producing new plants. ()
- 44 A model of the whole world that is made in the shape of a large ball. ()
- 45 The animal that is eaten by another animal. ()



Question 06

give reason

- ① Trees are considered as producers.
.....
- ② Soil is not one of the basic needs of plants.
.....
- ③ The food web is a system of energy flow.
.....
- ④ Plants need sunlight.
.....
- ⑤ The presence of root hairs in the plant root.
.....
- ⑥ The little squirrel needs food.
.....
- ⑦ Sugar is not a basic need for plants
.....
- ⑧ The plant does not grow well in a paper towel.
.....
- ⑨ Decomposers have an important role in returning energy to the ecosystem.
.....
- ⑩ Dandelion seeds spread in the presence of wind.
.....
- ⑪ Sea turtles eat a lot of plastic materials.
.....



- 12 Oxygen gas and water vapor are considered byproducts of the photosynthesis process for plants.
.....
- 13 The phenomenon of coral bleaching.
.....
- 14 Plants need sunlight.
.....
- 15 Oxygen has an indefinite shape and volume.
.....
- 16 The cup has a definite shape and volume.
.....
- 17 Cookware handles are made of plastic not metal.
.....
- 18 Vinegar takes the shape of the container that is placed in.
.....
- 19 Glass is used to make electric lamps.
.....
- 20 Wood is not used to make electrical wires.
.....
- 21 Iron and wood are solid state of matter.
.....
- 22 Chlorophyll in plant's leaves has an important role in photosynthesis process.
.....
- 23 Photosynthesis process is important for plants to survive.
.....
- 24 Xylem vessels are important for the plant.
.....
- 25 Snakes are secondary consumers.
.....
- 26 Circulatory system has an important role for human to survive.
.....



- 27 Ice melt When the temperature increases
.....
- 28 Producers depend on light energy of the Sun to grow.
.....
- 29 Both melting and freezing processes are physical changes
.....
- 30 Human can use helium gas safely.
.....
- 31 Green plants can make their own food.
.....
- 32 There are stomata in the plant leaves.
.....
- 33 Burdock seeds can stick to animal fur.
.....
- 34 Human needs to eat some animals and plants.
.....
- 35 Air is matter
.....
- 36 Helium gas used to fill balloons and blimps
.....

Question 07

what happens

- 1 The plant does not have natural resources.
.....
- 2 The roots disappear from the plant.
.....
- 3 Plants disappear from the surface of the earth.
.....



- 4 Leaving the plant without water for long periods.
.....
- 5 A seed of a plant falls on a suitable environment.
.....
- 6 If the decomposers disappear.
.....
- 7 If sunlight does not reach the Earth.
.....
- 8 If drought occurs in the ecosystem.
.....
- 9 When grass disappears from the desert ecosystem.
.....
- 10 When the water temperature increases for microorganisms.
.....
- 11 When the amount of plastic materials in the marine environment increases.
.....
- 12 If living organisms cannot adapt to climate changes.
.....
- 13 If rain does not fall and drought occurs in the ecosystem.
.....
- 14 If you put a bottle of water in the freezer.
.....
- 15 If you expose a piece of ice to the sun for a long time.
.....
- 16 When water is exposed to high temperature.
.....
- 17 When pressing on an inflated balloon.
.....



18 If the particles of the matter are interconnected and close in relation to their density.

.....

19 If the density of the substance is greater than the density of the liquid.

.....

20 If the density of the matter is less than the density of the liquid.

.....

21 The plant does not have roots.

.....

22 The green plant is placed in a dark place for a week.

.....

23 We put a seed of bean in wet soil for many days

.....

24 The eagles if the grasses were removed from an area.

.....

25 We remove the flowers of a plant.

.....

26 The solid matter particles if it is heated.

.....

27 The coral reefs when the seawater temperature rises

.....

28 Plant leaves don't contain chlorophyll.

.....

29 The speed of the particles of a liquid if it changes into gas.

.....

30 Plants have no stem.

.....

31 A magnet is put close to an iron nail and a plastic spoon.

.....



- 32 Coral reefs when water temperatures rise.

Question 08

answer the following

Create a food chain from the following organisms.

- 1 Rat – Grass – Hawk – Snake

- 2 Insect - snake - grass - frog – hawk.

- 3 Coral – Zooplankton – Shark – Algae – Parrotfish

- 4 Sea urchin - shark - algae - parrot fish.

- 5 Rabbit – carrot - snake – bacteria – hawk.

Cross the odd word

- 1 Wood – Iron – Oxygen – Plastic.

- 2 Carbon dioxide gas – Sunlight – Water – Oxygen gas.

- 3 Oil – Milk – Water – Wood.

- 4 Roots – Stems – Leaves – Sunlight.

- 5 Clam – Zooplankton – Algae – Hawks

- 6 Pine trees – Apple trees – House flies – Grasses.

- 7 Mouse – Eagle – Grass – Snake.



Answer the following:

1-Mention one example of a consumer organism.

.....

2-Mention one example of a producer organism.

.....

3-Mention one example of a decomposer's organism.

.....

4-Mention the way of sticky and rough seeds dispersal.

.....

5-Mention the role of decomposers in the food chain.

.....

6-Mention the importance of the earth worms to the soil.

.....

7-Mention some methods that used to reduce pollution of the marine environment with plastic Materials

.....

8-Mention one of the causes of habitat losing.

.....

9-Mention the importance of the nursery.

.....

9- Mention the importance of plant roots.

.....

10- Mention the ways of seed dispersal.

.....

11- Mention the importance of the Earth model.

.....

12- Mention one of the uses of glass.

.....



13- Mention one of the uses of helium.

.....

14- Mention one of the uses of copper.

.....

15-Mention the function of arteries.

.....

16-Mention the importance of the solar system model.

.....

17-Mention the type of each of the following matters:

Oil	.....	Ruler	.....
Book	.....	Helium	.....
Apple	.....	Tree	.....
Water vapor	.....	Vinegar	.....
Table	.....	Milk	.....
Lemon juice	.....	Oxygen	.....

جميع أسئلة الشيت أسئلة رسميه من امتحانات المحافظات و أسئلة التقييمات من الاسبوع الاول للأسبوع ال 13





First term Questions Bank



Question 01

Choose the correct answer

- 1 Blood rich in oxygen moves inside the body from the heart to the body's organs through.....
 (a) arteries (b) veins (c) phloem
- 2 The..... absorb water and salts from the soil.
 (a) stem (b) leaves (c) root
- 3 Potato plant has stem.
 (a) upright (b) climb (c) tuber
- 4 Which of the following substances consists of particles that are closely connected to each other?
 (a) Helium gas (b) Wood (c) Cooking oil
- 5 In the process of photosynthesis, light energy is converted into energy.
 (a) gravity (b) thermal (c) chemical
- 6 is one of the basic needs of the plant.
 (a) Soil (b) Air (c) Oxygen
- 7 The matter consists of a group of
 (a) organs (b) devices (c) particles
- 8 Root hairs help inthe amount of water that the plant can take from the soil.
 (a) increasing (b) decreasing (c) no change
- 9 The process of transporting seeds from one place to another is called
 (a) seed germination (b) transpiration (c) seed dispersal
- 10 The atmospheric air is considered a matter.
 (a) solid (b) frozen (c) gaseous



- 11 Thedelivers water and salts from the root to the plant leaves.
 (a) stem (b) leaves (c) root
- 12 All of the following are considered as consumers organisms except.....
 (a) owl (b) rabbit (c) algae
- 13 Which of the following is not considered a matter?
 (a) Wood (b) Air (c) Light
- 14 The organisms are responsible for returning the organic elements to the soil.
 (a) producers (b) consumers (c) decomposers
- 15 Blood rich in carbon dioxide returns to the heart through
 (a) veins (b) arteries (c) phloem
- 16 The process of photosynthesis occurs in
 (a) stem (b) flowers (c) leaves
- 17 The human transportation system is called system.
 (a) digestive (b) circulatory (c) respiratory
- 18 Pen and ruler are examples of matter
 (a) solid (b) Liquid (c) Gaseous
- 19 The needs of plant and animal are similar in all of the following except
 (a) water (b) air (c) method of obtaining food
- 20 The plant absorbs gas during the process of photosynthesis.
 (a) oxygen (b) carbon dioxide (c) Nitrogen
- 21 The plant makes its food, which is through the process of photosynthesis.
 (a) sugar (b) protein (c) seeds
- 22 The food chain begins with
 (a) decomposers (b) producers (c) consumers
- 23 The particles of matter are very close to each other in the state of
 (a) oxygen (b) Water (c) iron



- 24 Phloem vessels carry glucose down from to the rest of the plant parts.
 (a) leaves (b) stems (c) Roots
- 25 The is considered as an organ of the circulatory system.
 (a) skin (b) heart (c) Brain
- 26 The plant obtains energy directly from the
 (a) moon (b) animal (c) Sun
- 27 During photosynthesis, plants release into the air so that we can breathe
 (a) carbon dioxide (b) oxygen (c) Sugar
- 28 Which of the following organisms could end the food chain?
 (a) Mouse and snake (b) Rabbit and carrots (c) Bacteria and fungi
- 29 The heart consists of..... chambers.
 (a) three (b) four (c) Five
- 30 Xylem vessels are tubes that allow water to move from the roots to other parts of the plant.
 (a) up (b) down (c) in its place
- 31 Among the non-living components of the ecosystem
 (a) Animal (b) Plant (c) Soil
- 32 A component within a plant that absorbs sunlight during photosynthesis
 (a) Green chlorophyll (b) Stomata (c) Xylem
- 33 All of the following are considered as producer organisms except.....
 (a) carrot (b) rabbit (c) grass
- 34 Water is found in nature in states.
 (a) three (b) Four (c) Five
- 35 Fungi and bacteria are found in the of the food chain.
 (a) beginning (b) middle (c) end
- 36 Air passes through small openings in the leaves of the plant called
 (a) stomata (b) green chlorophyll (c) xylem



- 37 Energy passes from the sun to the consumers organisms through organisms.
- (a) predators (b) producer (c) decomposers
- 38 The potato plant is known to have a stem that extends underground.
- (a) tuber (b) extension (c) climber
- 39 Everything that has mass and occupies space is called
- (a) volume (b) State (c) matter
- 40 The obtains energy directly from the sun.
- (a) plant (b) human (c) animal
- 41 The food chain starts with the source of energy which is
- (a) oxygen (b) Sun (c) Moon
- 42 Among the organisms that produce food.....
- (a) animal (b) plant (c) soil
- 43 The organisms increase soil fertility.
- (a) producer (b) carnivore (c) decomposer
- 44 The distances between the particles of a gaseous matter are the distances between the particles of a liquid matter.
- (a) double (b) greater than (c) smaller than
- 45 We use the unit to measure the mass of the body.
- (a) liter (b) kilogram (c) meter
- 46 All of the following are chemical properties of matter except
- (a) burn (b) color (c) Rust
- 47 The is considered a similar copy to the real thing to illustrate its shape or the way of its work.
- (a) energy (b) particle (c) model
- 48 We use to measure temperature.
- (a) ruler (b) thermometer (c) measuring cup
- 49 Which of the following properties of matter cannot be measured?
- (a) Length (b) Mass (c) Taste



- 50 The matter has a fixed volume and a variable shape.
 (a) solid (b) liquid (c) frozen
- 51 The amount of the matter that the body contained is known as
 (a) volume (b) temperature (c) mass
- 52 All of the following are units of mass measurement except
 (a) tons (b) grams (c) liters
- 53 A tape measure is used to measure
 (a) temperature (b) weight (c) length
- 54 The movement of water particles is slower than the movement of
 (a) oil (b) car (c) hydrogen
- 55 The is known as the space that occupied by a body.
 (a) mass (b) volume (c) length
- 56 Steam rising from food is an example of a state.
 (a) solid (b) liquid (c) gaseous
- 57 We use to measure the mass of a book
 (a) measuring cup (b) common balance (c) thermometer
- 58 Which of the following substances can be poured?
 (a) salt (b) water vapor (c) milk
- 59 is considered one of the matters that are attracted to magnets.
 (a) Plastic (b) Iron (c) Cork
- 60 The is considered one of the chemical properties of matter.
 (a) color of apples (b) smell of vinegar (c) burning of the paper
- 61 5 liters = cm³
 (a) 0.5 (b) 500 (c) 5000
- 62 All of the following describe the physical properties of matter except
 (a) Taste (b) Iron rust (c) Color
- 63 is used in making car tires.
 (a) Copper (b) Rubber (c) Glass



- 64 floats above the surface of the water.
 (a) Iron (b) Aluminum (c) Wood
- 65 The system transports food and oxygen in humans.
 (a) nervous (b) digestive (c) circulatory
- 66 The is considered one of the causes of disruption in the marine environmental web.
 (a) habitat restoration (b) overfishing (c) recycling of plastic materials
- 67 The causes the death of marine organisms when feeding on them.
 (a) fish (b) plants (c) plastic materials
- 68 When the grass in the ecosystem decreases, the number of rabbits
 (a) increases (b) is not affected (c) decreases
- 69 Overfishing leads to the number of marine organisms.
 (a) increase (b) growth (c) decrease
- 70 The photosynthesis process takes place in
 (a) stems (b) flowers (c) leaves
- 71 The are considered a home to many fish.
 (a) microorganisms (b) sea turtles (c) coral reefs
- 72 All of the following cause disruption to food webs in the desert environment except.....
 (a) drought (b) light rain (c) pollution
- 73 The drying up of lakes leads to..... the ecosystem.
 (a) stability (b) imbalance (c) strength
- 74 The measuring unit of volume
 (a) cm (b) cm³ (c) Kg
- 75 If the climate is suitable, the population of a species will
 (a) increase (b) decrease (c) die
- 76 If the amount of grass increases, this directly increases number of
 (a) hawks (b) rabbits (c) caracals



- 77 Plants needand that helps them make photosynthesis process.
- a sunlight – carbon dioxide b sunlight – oxygen c oxygen – nutrients
- 78 Oil takes the of its container.
- a shape b colour c mass
- 79 Steel is used in making hammers because it is
- a flexible b transparent c hard
- 80 Ice can turn into water by
- a heating b rusting c freezing
- 81 The phenomenon of coral bleaching happens as a result ofwater temperature.
- a rising b moderating c decreasing
- 82 If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will
- a increase b decrease c die
- 83 To examine the structure of tiny particles of a matter, we can use
- a thermometer b balance c microscope
- 84 Maple seeds travel by wind, because they areseeds.
- a light b spiny c heavy
- 85 A state of matter that has definite shape and definite volume is
- a solid b liquid c gas
- 86 Flowers produce for reproduction
- a leaves b stems c seeds
- 87 The used material in making the body of cooking pans is
- a copper b glass c wood
- 88 To separate sand from water, we can useprocess.
- a filtration b evaporation c melting



- 89 Living organisms that decay dead organisms are called
- a producers b primary consumers c decomposers
- 90 Plants use during photosynthesis process.
- a nitrogen b oxygen c carbon dioxide
- 91 When coral the seawater, they may ingest microplastics.
- a evaporate b filter c cool
- 92 To see the components of one blood cell, we need
- a electron microscope b Scale c measuring tape
- 93are pores on the surface of plant's leaves that allow gases to move into and out of the plant.
- a Stomata b Xylem c Phloem
- 94 The microorganisms need water to survive.
- a hot water b warm water c cold water
- 95 An example of a gas is
- a chocolate b oxygen c pencil
- 96 Food moves from the leaves to the other parts of the plant throughtubes.
- a stomata b roots c phloem
- 97 The final link in any food chain is the
- a consumer b producer c decomposer
- 98 The if used to make electrical wires due to its properties.
- a glass b copper c helium
- 99 The gas that produced from photosynthesis process is
- a carbon dioxide b oxygen c nitrogen
- 100 The marine food web usually starts with
- a clam b zooplankton c algae



- 101 Burning of fuel in cars is considered as change of matter.
 (a) chemical (b) physical (c) physical and chemical
- 102 All the following factors pollute the water, except
 (a) plastic garbage (b) animals' wastes (c) sunlight
- 103 carry blood that is rich in oxygen and glucose from the heart to the body cells.
 (a) Veins (b) Lungs (c) Arteries
- 104 In a food chain the energy transfers from
 (a) a predator to a prey (b) a prey to a predator (c) a predator to a producer
- 105 All the following happen to the particles of oil when it is cooled, except that they
 (a) move slower (b) move faster (c) vibrate less
- 106 The physical property of milk that you can see is the of it.
 (a) odour (b) texture (c) colour
- 107 Decomposers alwaysthe soil.
 (a) pollute (b) damage (c) benefit
- 108 Salt can be separated by of salty water.
 (a) melting (b) evaporation (c) freezing

Question 02

put (true) or (false)

- 1 Blood moves in the arteries and veins in two directions.
- 2 Roots absorb light from sun.
- 3 The lion is a consumer organism
- 4 Plant and human do not depend on themselves to obtain food
- 5 Plants that grow away from sunlight are green.
- 6 Soil is considered a basic need for plant growth
- 7 The ecosystem is affected when decomposers disappear.



- 8 Humans are the main source of energy on Earth ☐
- 9 The plant uses natural resources to grow and flourish ☒
- 10 Coral reefs are habitat to many fish. ☒
- 11 An ecosystem is several interconnected of the food chains with each other ☐
- 12 In the ecosystem, energy is transferred from one organism to another ☒
- 13 Photosynthesis occurs in plant seeds. ☐
- 14 The food chain begins with consumers ☐
- 15 The octopus is an example of a productive organism in the marine ecosystem. ☐
- 16 Chlorophyll gives the plant its distinctive green color. ☒
- 17 Recycling of plastic contributes to preserving the ecosystem ☒
- 18 The xylem carry glucose from the leaves to the rest of the plant. ☐
- 19 Light seeds are spread by the wind. ☒
- 20 The food web is a group of interconnected food chains ☒
- 21 The plant does not need sunlight in the process of photosynthesis. ☐
- 22 Milk has a fixed shape whatever the shape of the container is different ☐
- 23 The snake is an example of a predator and prey in some food chains. ☒
- 24 The food chain in the desert environment begins with algae ☐
- 25 The number of living organisms decreases if climatic conditions are suitable ☐
- 26 The arteries and veins in the human body are similar to the vessels of xylem and phloem in transporting water and food ☒
- 27 Ice turns into a liquid by cooling ☐
- 28 Plastic materials have a positive effect on marine organisms ☐
- 29 Heavy rain leads to disruption in the desert ecosystem. ☒
- 30 Sound is a form of energy ☒
- 31 Gaseous matter does not occupy space. ☐



- 32 Loss of habitat is most important causes of extinction
- 33 The same substance can exist in nature in more than one state
- 34 Human activities that occur on land effect on marine ecosystem
- 35 Photosynthesis process occurs in the roots of plants.
- 36 Habitat loss is one of the most important causes of extinction.
- 37 When we press on a balloon, its volume increases.
- 38 Germs can be seen with the naked eye.
- 39 Models help understand how things work.
- 40 Solids, liquids, and gases have a specific shape in common.
- 41 Particles of solid matter spread very quickly.
- 42 A gaseous matter has a fixed volume and an unstable shape.
- 43 Balloons are filled with helium gas.
- 44 A ruler is used to measure the mass of objects
- 45 The shape of houses varies from one environment to another.
- 46 The texture of the fabric is one of the chemical properties of the matter.
- 47 The roof of a desert house is similar to the roof of a house in a tropical forest.
- 48 Temperature expresses the speed of particles movement of matter
- 49 Shape and volume are physical properties of matter.
- 50 Wood is a good conductor of electricity
- 51 Iron rust is considered a physical change in the matter.
- 52 A measuring cup is used to measure temperature.
- 53 The mass of matter changes from one state to another
- 54 Metal rusts due to chemical changes that occur to the material.
- 55 Coral bleaching has a positive impact on coral reefs.



- | | | |
|----|--|---|
| 56 | Cutting wood into pieces changes its mass and colour. | ✗ |
| 57 | A flower is a reproductive part of the plant. | ✓ |
| 58 | Stomata allow gases to move into and out of the plant. | ✓ |
| 59 | Coconut seeds disperse by wind. | ✗ |
| 60 | All matter are made up of tiny particles. | ✓ |
| 61 | Roots fix the plant in the soil. | ✓ |
| 62 | Blood moves only in one direction in human's veins. | ✓ |
| 63 | Healthy habitats provide living organisms with clean air, healthy food and water. | ✓ |
| 64 | If coral reefs are destroyed, many marine food chains will destroy | ✓ |
| 65 | Producers need consumers to live and grow | ✗ |
| 66 | Plants stems absorb oxygen from the air. | ✗ |
| 67 | Desalination process contains filtration process only. | ✗ |
| 68 | The first link in any food chain is a consumer. | ✗ |
| 69 | Iron spoon is attracted to the magnet | ✓ |
| 70 | Handles of cooking pans are made up of wood or plastic. | ✓ |
| 71 | The roof of desert home is similar to rainforest home. | ✗ |
| 72 | When the matter gains more energy, it can change to different states | ✓ |
| 73 | Producers form their own food, while decomposers return nutrients back to the ecosystem. | ✓ |
| 74 | Green plants can grow well in a dark room. | ✗ |
| 75 | If the masses of two different materials are equal, so their volume must be equal. | ✗ |
| 76 | Xylem is important for plants to transfer water from roots to leaves. | ✓ |
| 77 | Coral reefs bleaching occur when temperature of seawater decreases. | ✗ |
| 78 | Liquid particles move faster than solid particles. | ✓ |
| 79 | Thermometer is used to measure the length of a book | ✗ |
| 80 | Helium takes the shape and the volume of its container | ✓ |



Question 03

Complete the following sentences

- ① The transport system in plants is similar to circulatory system in humans.
- ② The plant gets water and nutrients from the soil.
- ③ The decomposers feed on the remains of dead organisms.
- ④ The roots help the plant get water from the soil.
- ⑤ Fish and birds are consumers organisms
- ⑥ The energy source of plant is glucose sugar.
- ⑦ Energy is transferred from producers to consumers through the food chain
- ⑧ Light energy in the plant is converted into chemical energy in photosynthesis process.
- ⑨ The organisms responsible for returning organic elements to the soil are the decomposers.
- ⑩ The plant needs carbon dioxide gas, water and sunlight to carry out of photosynthesis process.
- ⑪ The island of Palau needs to establish a conservation program to protect its waters from pollution.
- ⑫ Plant cells depend on sunlight as a source of energy and growth.
- ⑬ The interconnection of a group of food chains is known food web.
- ⑭ The process of reproduction is the production of new individuals of the same species.
- ⑮ Coconut seeds are transmitted by water.
- ⑯ Loss of habitat is one of the most important reasons for extinction
- ⑰ The oxygen gas is produced through the process of photosynthesis and humans used it for breathing.
- ⑱ The decomposers organisms help in soil fertility.
- ⑲ The main source of energy on the surface of the Earth is the sun.



- 20 The food chain begins with a **producer** organism.
- 21 The ecosystem consists of **living organisms** and non-living things.
- 22 Light seeds are spread by **wind**.
- 23 The absence of producers leads to the **death** of consumers.
- 24 Matter can be poured in the **liquid** state
- 25 When producers organisms disappear from an ecosystem, **primary consumers** organisms die.
- 26 Algae are considered **producer** organisms in the marine environment
- 27 The **arteries** carry oxygen from the heart to all body parts.
- 28 Seabirds depend on **small fish** for their food.
- 29 Matter can exist in **3** states.
- 30 Matter consists of small units called **particles**
- 31 **Measuring cup** is used to measure the volume of a matter.
- 32 **copper** is used to make electrical wires.
- 33 **Helium** gas is used to fill balloons.
- 34 **Copper** is used to make the electrical wires because it is a good conductor of electricity.
- 35 **Sunlight** causes plastic materials to break down into small particles.
- 36 In the plant, water moves from the roots to the leaves through **stem**
- 37 Coral reefs turned to white due to **increasing** water temperature.
- 38 The shape of the **gas** matter and its volume are variable.
- 39 Sound is considered a form of **energy**.
- 40 Everything that has mass and occupies space is called **matter**.
- 41 Color, taste and smell are the **physical** properties of a matter.
- 42 The length of the classroom can be measured by **meter** unit.



- 43 Thermal conduction is one of the **physical** properties of the matter.
- 44 Iron rust is an example of a **chemical** properties change of a matter.
- 45 3 kilograms = **3000** grams.
- 46 **copper** is used to make cooking utensils.
- 47 Water can exist in a solid state in the form of **ice**.
- 48 Particles of **gas** matter spread very quickly.
- 49 The **volume** of matter is measured by a measuring cup.
- 50 The **liquid** matter can be poured but the solid matter cannot be poured.
- 51 When a certain type of predator disappears from the ecosystem, the numbers of preys are **increased**.
- 52 The **liquid** state of water changes when it is heated or cooled.
- 53 Wood **floats** on the water.
- 54 We can use **helium** gas to fill blimps because it is **lighter** than air.
- 55 Sea **turtle** cannot differentiate between a jellyfish and a piece of **plastic** in the water.
- 56 Veins carry blood that contains **carbon dioxide** from body parts to **heart**
- 57 Changing water from solid state to liquid state is called **melting** while changing water from gaseous state to liquid state is called **condensation**
- 58 **Oxygen** is a gas produced during photosynthesis process.
- 59 **Model** is a copy that is similar to real thing that shows what it looks like or works like.
- 60 Bacteria and fungi are two examples of **decomposers**
- 61 An example of liquid is **water**
- 62 When ice is melted it changed from **solid** state to **liquid** state.
- 63 There are three types of vessels in the human circulatory system which are **arteries**, **veins** and blood capillaries.
- 64 Plants produce **oxygen** and **sugar** during photosynthesis process.
- 65 **Liquid** and **gas** take the shape of their containers.



- 66 The **circulatory** system transports nutrients and oxygen to cells and organs in human.
- 67 The tubes that carry food from leaves to all plant parts are called **phloem**
- 68 Iron rusting is from the **chemical** changes of matter.
- 69 **Overfishing** is from human activity that harm marine ecosystem.
- 70 Odor and texture are from **physical** properties of matter.
- 71 The freezing point of water is **0°C**.
- 72 Trees and other plants make food through **photosynthesis** process.
- 73 From properties of glass is that it is **transparent**
- 74 Water is the matter in **liquid** state, while water vapour is **gas** state.
- 75 We can separate sand from water by **filtration** process and salt from water by **evaporation** process.
- 76 Travelling by wind and floating on water are from ways of **seed dispersal**.
- 77 The potato stems extend underground and called **tubers**.
- 78 **Microorganisms** are the producers in the marine food web.
- 79 Mixing baking soda with vinegar is an example of **chemical** changes.
- 80 Microorganisms are found in **cold** water habitats.

Question 04

write scientific term for each of the following

- 1 Stems that extend horizontally on the surface of the earth and help in the formation of new plants such as strawberry plant. **Runner stem**
- 2 Small openings (holes) in the leaves of the plant through which air passes **stomata**
- 3 A process that occurs inside the leaves of the plant to make its food. **photosynthesis process**
- 4 Thick and solid stems such as the roots of trees and shrubs **wood stem**
- 5 A substance responsible for the green color of the plant **chlorophyll**
- 6 Vessels in the plant which are responsible for transporting nutrients from the leaves to all parts of the plant. **phloem**



- 7 Vessels that transport water and nutrients from the roots to the parts of the plant. **Xylem**
- 8 Vessels that transport blood rich in carbon dioxide and a little oxygen and nutrients from parts of the body to the heart. **veins**
- 9 They are small, dark parts located in the middle of flower **seeds**
- 10 The reproductive parts of the plant. **flower**
- 11 Transferring seeds from one place to another. **seeds dispersal**
- 12 A group of vessels that transport important nutrients in one direction between parts of the plant **transport system**
xylem - phloem
- 13 The path of energy flow from one organism to another **Food chain**
- 14 A process in which the plant obtains energy. **photosynthesis**
- 15 A system consisting of living organisms and non-living things. **ecosystem**
- 16 The main source of energy on Earth. **the sun**
- 17 A group of food chains interacted with each other **food web**
- 18 The properties that can be observed using the five senses. **physical properties**
- 19 Organisms that produce their own food. **producers**
- 20 An area in the ocean where small pieces of coral are cared. **Nursery**
- 21 The disappearance or death of one of a species of marine organisms. **Extinction**
- 22 Small pieces of plastic materials are a grain of rice sized. **microplastic**
- 23 The amount of space occupied by a body. **volume**
- 24 A matter whose particles are not interconnected and move completely freely. **gas**
- 25 The small units that make up matter **particles**
- 26 A copy of something to show what it looks like or how it works. **model**
- 27 A non-toxic material used to fill air balloons. **helium gas**
- 28 The ability of a material to transfer electricity and heat through it. **conduction**



- 29 It is a process of removing salt from water.
- 30 Process in which the matter changes from solid state to liquid state by heating.
- 31 They are consumers which feed on secondary consumers.
- 32 Anything that has a mass and takes up a space.
- 33 The tool used to measure the length of a wall.
- 34 A part of the plant that carries water and nutrients from the roots to the leaves.
- 35 It is a matter that is formed from combine two or more materials chemically.
- 36 The gas that is produced from photosynthesis process.
- 37 They are organisms that break down dead bodies
- 38 It is the number of organisms of one type of species living in an area.
- 39 The liquid substance that plants, animals and human need to survive.
- 40 The gas that plant needs to make photosynthesis process
- 41 It is the final link in a food chain.
- 42 Flying living organisms that build their nests on the top of mountain cliffs and dive deeply into the sea to eat.
- 43 The process of producing new plants.
- 44 A model of the whole world that is made in the shape of a large ball.
- 45 The animal that is eaten by another animal.

Desalination

Melting

tertiary consumers

matter

measuring tape

The stem

Compound

oxygen gas

Decomposers

population

water

Carbon dioxide gas

Decomposer

Seabirds

Plant's reproduction

Globe

prey

Question 06

give reason

- 1 Trees are considered as producers.

Because they can make their own food by photosynthesis process



- 2 Soil is not one of the basic needs of plants.
Because some plants can grow without soil such as in water
- 3 The food web is a system of energy flow.
because it is interconnected food chains that show energy transfer between organisms when they feed on each others
- 4 Plants need sunlight.
To make its own food by photosynthesis process.
- 5 The presence of root hairs in the plant root.
It absorbs more amount of water and nutrients from the soil.
- 6 The little squirrel needs food.
To get energy
- 7 Sugar is not a basic need for plants
Because the plant makes sugar during photosynthesis process.
- 8 The plant does not grow well in a paper towel.
Because it needs nutrients from the soil to grow well.
- 9 Decomposers have an important role in returning energy to the ecosystem.
Because it recycles nutrients back into the ecosystem – increase soil fertility
- 10 Dandelion seeds spread in the presence of wind.
Because they are light seeds.
- 11 Sea turtles eat a lot of plastic materials.
because it can't differentiate between a jellyfish and a piece of plastic
- 12 Oxygen gas and water vapor are considered byproducts of the photosynthesis process for plants.
During photosynthesis process plant make its food (glucose sugar) and oxygen gas and water vapor as byproducts.



- 13 The phenomenon of coral bleaching.
when water temperature rises, coral reefs get rid of algae and its color turn completely into white
- 14 Plants need sunlight.
To make its own food by photosynthesis process.
- 15 Oxygen has an indefinite shape and volume.
because oxygen is gas
- 16 The cup has a definite shape and volume.
because cup is solid matter
- 17 Cookware handles are made of plastic not metal.
Because plastic is bad conductors of heat and metal is good conductor of heat.
- 18 Vinegar takes the shape of the container that is placed in.
because it is liquid and its particles slide over each other.
- 19 Glass is used to make electric lamps.
Because it is transparent
- 20 Wood is not used to make electrical wires.
Because wood is bad conductor of electricity.
- 21 Iron and wood are solid state of matter.
Because they have definite shape and volume
- 22 Chlorophyll in plant's leaves has an important role in photosynthesis process.
Because chlorophyll absorbs the energy of sunlight that helps in making photosynthesis process
- 23 Photosynthesis process is important for plants to survive.
Because it helps the plant to make its own food
- 24 Xylem vessels are important for the plant.
Because they transport water and nutrients to the plant's leaves
- 25 Snakes are secondary consumers.
Because they eat primary consumers that eat plants
- 26 Circulatory system has an important role for human to survive.
Because it transports oxygen and nutrients through the blood to all the body parts



- 27 Ice melt When the temperature increases particles gain energy and move faster and ice change from solid state to liquid state (water)
- 28 Producers depend on light energy of the Sun to grow. Because they can make their own food through photosynthesis by absorbing the sunlight through their leaves
- 29 Both melting and freezing processes are physical changes Because in both of them the matter changes without any change in its structure
- 30 Human can use helium gas safely. Because it is not flammable and not poisonous
- 31 Green plants can make their own food. Because plant make photosynthesis process
- 32 There are stomata in the plant leaves. To allow gases to move into and out of the pant
- 33 Burdock seeds can stick to animal fur. Because burdock seeds have spines
- 34 Human needs to eat some animals and plants. To get energy
- 35 Air is matter Because it has a mass and volume (take a space)
- 36 Helium gas used to fill balloons and blimps because helium is lighter than air (density of helium less then density of air)

Question 07

what happens

- 1 The plant does not have natural resources. It can't survive and can't grow so it will die.
- 2 The roots disappear from the plant. The plants can't absorb water and nutrients from the soil.



- 3 Plants disappear from the surface of the earth.
All living organisms will die because they can't breathe in oxygen gas that produced from photosynthesis process.
- 4 Leaving the plant without water for long periods.
It will die because it can't make its own food by photosynthesis process.
- 5 A seed of a plant falls on a suitable environment.
It will germinate then it will grow.
- 6 If the decomposers disappear.
Dead bodies will not be decomposed - nutrients will not return back to the soil
- 7 If sunlight does not reach the Earth.
The plants can't make their own food by photosynthesis process and can't produce oxygen gas which all living organisms need it to breathe.
- 8 If drought occurs in the ecosystem.
destroy ecosystem because plants will die and also the primary consumer will die (ecosystem may be destroyed)
- 9 When grass disappears from the desert ecosystem.
The primary consumer will move to other place to search for food or they will die
- 10 When the water temperature increases for microorganisms.
microorganisms will move to cooler water and also small fish
- 11 When the amount of plastic materials in the marine environment increases.
plastic will harm marine ecosystem
- 12 If living organisms cannot adapt to climate changes.
living organisms will move to another habitat or they will die (population will decrease)
- 13 If rain does not fall and drought occurs in the ecosystem.
harm ecosystem, plant will die and primary consumer will move to another place or it will die so the population will decrease



- 14 If you put a bottle of water in the freezer.
It will freeze (change from liquid state to solid state)
- 15 If you expose a piece of ice to the sun for a long time.
It will change from solid state to liquid state.
- 16 When water is exposed to high temperature.
water will evaporate (it changes from liquid state to gas state)
- 17 When pressing on an inflated balloon.
its volume decreases, and if you press more it will pop
- 18 If the particles of the matter are interconnected and close in relation to their density.
Its density increase.
- 19 If the density of the substance is greater than the density of the liquid.
It will sink in liquid.
- 20 If the density of the matter is less than the density of the liquid.
It will float on liquid.
- 21 The plant does not have roots.
It can't absorb water and nutrients from the soil and can't be fixed in the soil.
- 22 The green plant is placed in a dark place for a week.
The plant can't make photosynthesis process and it will die
- 23 We put a seed of bean in wet soil for many days
It will germinate and grow well
- 24 The eagles if the grasses were removed from an area.
At first eagles would not be affected but when the consumers die the eagles have less food
- 25 We remove the flowers of a plant.
The plant can't reproduce seeds that help it to reproduce
- 26 The solid matter particles if it is heated.
The particles of solid matter move, vibrate and spin around faster
- 27 The coral reefs when the seawater temperature rises
They get rid of algae from their tissues causing coral bleaching



- 28 Plant leaves don't contain chlorophyll.
The plant can't absorb the energy from sunlight and can't make photosynthesis process
- 29 The speed of the particles of a liquid if it changes into gas.
The speed of particles will increase
- 30 Plants have no stem.
Water and nutrients will not move up from the roots to the leaves
- 31 A magnet is put close to an iron nail and a plastic spoon.
The magnet attracts iron nail and plastic spoon doesn't attract to the magnet
- 32 Coral reefs when water temperatures rise.
Corals get rid of algae, coral color turn to white

Question 08

answer the following

Create a food chain from the following organisms.

- 1 Rat – Grass – Hawk – Snake
Grass → Rat → Snake → Hawk
- 2 Insect - snake - grass - frog – hawk.
Grass → Insect → Frog → Snake → Hawk
- 3 Coral – Zooplankton – Shark – Algae – Parrotfish
Algae → Zooplankton → Coral → Parrotfish → Shark
- 4 Sea urchin - shark - algae - parrot fish.
Algae → sea urchin → parrot fish → shark.
- 5 Rabbit – carrot - snake – bacteria – hawk.
Carrot → rabbit → snake → hawk → bacteria.

Cross the odd word

- 1 Wood – Iron – Oxygen – Plastic. Oxygen
- 2 Carbon dioxide gas – Sunlight – Water – Oxygen gas. Oxygen gas



- ③ Oil – Milk – Water – Wood.
- ④ Roots – Stems – Leaves – Sunlight.
- ⑤ Clam – Zooplankton – Algae – Hawks
- ⑥ Pine trees – Apple trees – House flies – Grasses.
- ⑦ Mouse – Eagle – Grass – Snake.

Wood
Sunlight
Hawks
House flies
Grass

Answer the following:

1-Mention one example of a consumer organism. **Rabbit – deer – lion – snake.**

2-Mention one example of a producer organism. **Plants – grass – trees – carrot.**

3-Mention one example of a decomposer's organism. **Bacteria – fungi – worms**

4-Mention the way of sticky and rough seeds dispersal.

By animal fur or human clothes.

5-Mention the role of decomposers in the food chain.

They decompose the dead organisms and return their nutrients back to the soil.

6-Mention the importance of the earth worms to the soil.

They increase the soil fertility because their wastes rich in nutrients.

7-Mention some methods that used to reduce pollution of the marine environment with plastic Materials

- 1. decrease the use of plastic products**
- 2. recycle plastic product**

8-Mention one of the causes of habitat losing.

- building more buildings and roads**
- throwing waste materials in water**
- overfishing**

9-Mention the importance of the nursery.

scientists take care of corals until they grow and can be moved back to reefs

9- Mention the importance of plant roots.

fix plant in the soil

absorb water and nutrients from the soil



10- Mention the ways of seed dispersal.

1. by wind 2. by water 3. by sticking to animal fur or human clothes

11- Mention the importance of the Earth model.

to know the shape of Earth

how much of Earth is covered with water

where different countries are located

12- Mention one of the uses of glass.

eyeglasses and electric lamp.

13- Mention one of the uses of helium.

Fill up the balloon and blimps.

14- Mention one of the uses of copper.

electric wires and cooking pans.

15-Mention the function of arteries.

Carry blood rich in oxygen and nutrients from heart to all body cells

16-Mention the importance of the solar system model.

- see all planet at once

- compare between planets, which one is the biggest

and which one is the closest to Earth

17-Mention the type of each of the following matters:

Oil	<u>Liquid</u>	Ruler	<u>solid</u>
Book	<u>solid</u>	Helium	<u>gas</u>
Apple	<u>solid</u>	Tree	<u>solid</u>
Water vapor	<u>gas</u>	Vinegar	<u>Liquid</u>
Table	<u>solid</u>	Milk	<u>Liquid</u>
Lemon juice	<u>Liquid</u>	Oxygen	<u>gas</u>



حمل الآن

مجانا وحصريا

المراجعة رقم (4)

الترم الاول





Final Revision

✱ (1) Write the scientific term:

Mr. Ahmed Elbasha

- 1) The animal that is eaten by another animal. (.....)
- 2) The liquid substance that plants, animals and human need to survive (.....)
- 3) part of the plant that anchors it in the soil. (.....)
- 4) It is a process by which a matter is changed from solid state to liquid state. (.....)
- 5) The property of matter which is measured by the measuring cup. (.....)
- 6) A model of the whole world that is made in the shape of a large ball (.....)
- 7) The process of producing new plants. (.....)
- 8) A group of living organisms that can produce their own food (.....)
- 9) Flying living organisms that build their nests on the top of mountain cliffs and dive deeply into the sea to eat. (.....)
- 10) The state of matter that has definite volume and shape (.....)
- 11) They are changes in matter which are usually reversible and don't affect its structure. (.....)
- 12) It is the process by which matter changes from liquid state to gas state. (.....)
- 13) A tool used to measure the length of wall. (.....)
- 14) They are consumers that exist at the top of food chains. (.....)
- 15) A human activity that leads to decreasing the number of fish and affecting many marine food webs (.....)
- 16) The gas that is produced from photosynthesis process. (.....)

- 17) A device used to examine one tiny particle such as a blood cell (.....)
-
- 18) The state of water when its temperature is located between 0°C and 100°C . (.....)
-
- 19) The process by which the plant can make its own food. (.....)
-
- 20) Parts of the plant that are responsible for reproduction. (.....)
-
- 21) They are organisms that break down dead organisms bodies. (.....)
-
- 22) It is the amount of space that matter takes up. (.....)
-
- 23) The non poisonous gas that is used in filling balloons (.....)
-
- 24) Tiny openings on the surface of plant's leaves that allow gases move into and out of the plant (.....)
-
- 25) The gas that the plant needs to make photosynthesis process (.....)
-
- 26) It is the final link in a food chain. (.....)
-
- 27) They are the reproductive parts of plant (.....)
-
- 28) They're narrow holes spread on the plant's leaves that allow gases to come in and out of the plant. (.....)
-
- 29) The system that transports blood throughout the human body (.....)
-
- 30) Blood vessels carry oxygenated blood from the heart to all body parts (.....)
-
- 31) They are tubes in the plant that transport food materials from they leaves to all plant parts. (.....)
-
- 32) The vessels .in a plant through which water anti nutrients move up from the roots to the leaves. (.....)
-
- 33) The primary source of energy for all organisms on Earth (.....)
-
- 34) The process by which plants make their own food using the energy of sunlight (.....)
-
- 35) It's a natural process through which the nutrients found in dead organisms' bodies return to the ecos (.....)

- 36) They are consumers that feed on primary consumers (.....)
-
- 37) It's a group of interconnected food- chains. (.....)
-
- 38) They're living organisms that recycle the energy into the ecosystem (.....)
-
- 39) It's the state of water after its freezing. (.....)
-
- 40) It's the state of matter that has a fixed shape and volume (.....)
-
- 41) It's the state of matter that has no definite shape or volume (.....)
-
- 42) It's a state of matter that can be poured in a container and takes its shape (.....)
-
- 43) It's the state of matter in which the particles have a lot of energy and move very freely (.....)
-
- 44) It's a tool that is used to measure the length of a wall or room. (.....)
-
- 45) They are the building units of matter. (.....)
-
- 46) It is a measurement of the amount of matter. (.....)
-
- 47) It's a process in which ice changes into water (.....)
-
- 48) It's a process in which water changes into ice. (.....)
-
- 49) It is a copy that is similar to the real thing . (.....)
-
- 50) It is the amount of space that the matter takes up. (.....)
-
- 51) It's matter that is used to make electric wires and cooking ppns (.....)
-
- 52) It's a hard and strong matter that 1s used to make hammers and screwdrivers. (.....)
-
- 53) It's a transparent and smooth matter that is used to make eyeglasses and windows (.....)
-
- 54) It's a flexible waterproof matter that is used .to make tires and gloves (.....)
-
- 55) It is a change in matter with a change in its structure producing a new substance (.....)

- 56) It is the process by which matter changes from a gaseous state to a liquid state. (.....)
-
- 57) It is anything that takes up space and has mass. (.....)
-
- 58) It's the formation of a flaky reddish layer of iron oxide occurs when iron reacts with oxygen (.....)
-
- 59) A part of plants that is responsible for reproduction. (.....)
-
- 60) They are materials that have definite volume, and they take the shape of the container. (.....)
-
- 61) It's the state of water after its freezing (.....)
-

***(2) Choose the right answer:**

1. Plants take from the air to make its own food.

- a. water b. oxygen gas c. carbon dioxide gas d. sugar

2. A community that includes living organisms and nonliving things is known as

- a. digestive system. b. respiratory system.
c. ecosystem. d. vascular system.

3. When the marine habitats are destroyed, the number of living organisms in their food webs is

- a. increased. b. decreased. c. not changed. d. doubled.

4. Some liquids come out from a during its eruption.

- a. star b. wooden piece c. volcano d. plastic piece

5. When the plant seed begins to grow and makes sprouts, this process is called

- a. respiration. b. germination. c. absorption.

6. Decomposers always the soil.

- a. pollute b. damage c. benefit d. harm

7. The marine food web usually starts with

- a. clam. b. algae. c. zooplankton. d. parrotfish.

8. The volume of one liter of water has a mass of

- a. one gram. b. one kilogram.
c. one milliliter. d. one cubic centimeter.

9. When the water is heated, its particles

- a. move slower. b. move faster.
c. move with the same speed. d. do not move.

10. Salt can be separated by of salty water.

- a. melting b. evaporation c. freezing d. condensation.

11. In plant's leaves, light energy of the Sun is converted into energy during photosynthesis process.

- a. sound b. electric c. chemical d. kinetic

12. Which of the following matter has a definite volume and shape ?

- a. Water. b. Milk. c. Ice. d. Air.

13. In the presence of water, seeds can germinate at the beginning of growth without the need of

- a. soil. b. rocks. c. insects. d. dry paper towel.

14. Which of the following living organisms can make their own food ?

- a. Hawks. b. Mice. c. Pine trees. d. Caracals.

15. If all grasses were removed completely from an ecosystem, rabbits in this ecosystem will

- a. increase. b. decrease. c. die. d. not be affected.

16. A snake is a predator for mice, while snake is considered as a prey for

- a. rabbit. b. frog. c. eagle. d. deer.

17. Oil takes the of its container.

- a. volume b. shape c. color d. mass

18. Condensation changes the matter from state to state.

- a. solid - liquid b. liquid - gas c. gas - liquid d. liquid - solid

19. The green plants can make their own food through

- a. roots. b. leaves. c. stems. d. flowers.

20. Any food chain starts with

- a. insects. b. plants. c. fungi. d. bacteria.

21. If the climate change is suitable, the population of a species will

- a. increase. b. decrease. c. die. d. not be affected.

22. We can measure the volume of a liquid by all the following units except

- a. kilogram. b. milliliters.
c. cubic centimeters. d. liters.

23. The kind of stems that extend underground are called stems.

- a. climb b. tuber c. runner d. wood

24. Many insects are considered as

- a. producers. b. decomposers.
c. primary consumers. d. secondary consumers

25. We can measure the mass of a cube of ice by using a

- a. thermometer. b. ruler.
c. measuring tape. d. balance.

26. We can identify milk by determining its

- a. color and texture.
- b. shape and odor.
- c. color and taste.
- d. color and size.

27. To separate sand only from salty water, we can use process.

- a. filtration
- b. evaporation
- c. melting
- d. freezing

28. Blood rich in carbon dioxide gas returns back to the heart through

- a. arteries.
- b. veins.
- c. lungs.
- d. xylem.

29. The measuring unit of volume

- a. cm.
- b. cm³
- c. Kg.
- d. gram.

30. Particles of are very close to each other.

- a. glass
- b. air
- c. oxygen
- d. water

31. If the amount of grass increases on ecosystem, this directly increases number of

- a. hawks.
- b. lions.
- c. caracals.
- d. rabbits.

32. Plants need and from the air that help them make photosynthesis process.

- a. sunlight - carbon dioxide
- b. sunlight - oxygen
- c. oxygen - nutrients
- d. oxygen – water

33. Steel is used in making hammers because it is

- a. flexible.
- b. transparent.
- c. hard.

34. Ice can turn into water by

- a. heating.
- b. rusting.
- c. freezing.

35. Among examples of physical changes is

- a. burning of wood.
- b. rusting of iron.
- c. cutting a paper

36. To examine the structure of tiny particles of a matter, we can use

- a. thermometer.
- b. balance.
- c. ruler.
- d. microscope.

37. Maple seeds travel by wind, because they are seeds.

- a. light
- b. spiny
- c. heavy
- d. smooth

38. Particles of are very close to each other.

- a. milk
- b. steam
- c. gold
- d. oxygen

39. Flowers produce for reproduction.

- a. leaves
- b. stems
- c. seeds
- d. roots

40. The used material in making the body of cooking pans is

- a. copper. b. glass. c. wood. d. helium.

41. To separate sand from water, we can use process.

- a. filtration b. evaporation c. melting d. freezing

42. Living organisms that decay dead organisms are called

- a. producers. b. primary consumers. c. decomposers. d. preys.

43. Plants use during photosynthesis process.

- a. nitrogen b. oxygen c. carbon dioxide d. sugar

44. Water takes the of its container.

- a. mass b. shape c. color d. volume

45. Any food chain starts with

- a. consumer. b. producer. c. fungi. d. decomposers.

46. are pores on the surface of plant's leaves that allow gases to move into and out of the plant.

- a. Stomata b. Xylem c. Phloem d. Hairs

47. The suitable habitat for microorganisms to survive is

- a. hot water. b. warm water. c. cold water. d. boiled water.

48. An example of a gas is

- a. chocolate b. rock. c. pencil d. oxygen.

49. Food moves from the leaves to the other parts of the plant through tubes.

- a. stomata b. roots. c. phloem d. xylem

50. The final link in any food chain is the

- a. consumer. b. producer. c. decomposer. d. food web.

51. Which of the following particles are very close together ?

- a. Oxygen gas. b. Water. c. Oil. d. Wood.

52. The is used to make electrical wires due to its properties.

- a. glass b. wood c. helium d. copper

53. The gas that is produced from photosynthesis process is

- a. carbon dioxide. b. oxygen. c. nitrogen. d. hydrogen.

54. The marine food web usually starts with

- a. clam. b. zooplankton. c. algae. d. parrotfish.

55. Particles of are very close to each other.

- a. oxygen b. steam c. milk d. gold

56. Burning of fuel in cars is considered as change of matter

- a. chemical b. physical c. physical and chemical

57. The of the plant absorbs water and nutrients from the soil.

- a. stems b. Leaves c. flowers d. roots

58. carry blood that is rich in oxygen and glucose from the heart to the body cells.

- a. Veins b. lungs c. Arteries d. Lungs and veins

59. In a food chain the energy transfers from

- a. a predator to prey to a predator. b. a prey to a predator
c. a predator to a producer. d. a consumer to a producer

60. All the following happen to the particles of oil when it is cooled, except that they

- a. move slower. b. move faster. c. vibrate less. d. come close together.

61. The physical property of milk that you can see is the of it.

- a. odor b. texture c. color d. taste

62. Glucose sugar is transported from the leaves to all parts of the plant through

- a. chlorophyll. b. stomata. c. xylem. d. phloem.

63. Organisms that break down dead animals and plants are called

- a. decomposers. b. consumers. c. preys. d. producers

64. When water is heated, its particles

- a. move slower. b. move faster.
c. move with same speed. d. don't move

65. All of the following are physical properties of matter except

- a. color. b. shape. c. rust. d. texture.

66. Potato plant has stem.

- a. upright b. climb c. tuber d. runner

67. The green plants can make their own food through

- a. roots. b. leaves. c. stems. d. flowers.

68. Any food chain starts with

- a. Insects. b. fungi. c. plants. d. bacteria.

69. The plant can make its own food during a process called

- a. reproduction.
- b. seed dispersal.
- c. photosynthesis.
- d. respiration.

70. The food chain starts with living organisms.

- a. producers
- b. consumers
- c. decomposers
- d. predators

71. A state of matter that has definite shape and definite volume is

- a. solid.
- b. liquid.
- c. gas.
- d. all the previous.

72. When corals the seawater, they may ingest microplastics.

- a. evaporate
- b. filter
- c. cool
- d. warm

73. is the solid state of water.

- a. Water
- b. Ice
- c. Steam
- d. Water vapor

74. All the following factors pollute the water, except

- a. plastic garbage.
- b. animals wastes.
- c. sunlight.
- d. human wastes.

75. The plant needs air in the photosynthesis process using

- a. root.
- b. xylem.
- c. phloem.
- d. stomata.

76. The measuring unit of mass is

- a. liter.
- b. gram.
- c. cm.
- d. ml.

(3) Complete the following sentences using the words below*1. (overfishing - shelter - toxic - predator)**

1. Healthy natural resources include clean air, healthy food, water and suitable
2. The human activity that directly decreases the marine population is known as
3. When a sea turtle eats a jellyfish, this means that the sea turtle is a living organism.
4. Plastic waste materials are very harmful to marine organisms, because they are and sharp.

2. (solid - liquid - gas - space - particles)

1. The state of matter that has a definite volume, but it doesn't have a definite shape is state.
2. Volume is the amount of that matter takes up.
3. We can classify the states of matter into liquid, and
4. Matter is made up of tiny

3. (chemical - physical - rough - odor)

1. Both of odor and texture of matter are considered from the properties of matter.
2. You can identify the of a juice by using the sense of smell.
3. We can describe the texture of sugar crystals by saying "it has crystal texture".
4. The ability of a piece of iron to rust is from the properties of matter

4. (physical - overfishing - shelter - chemical)

1. Iron rusting is from the changes of matter.
2. is from human activity that harm marine ecosystem.
3. Odor and texture are from properties of matter.
4. is a healthy natural area include clean air, food and water.

5. (tubers - habitats - decomposers - microorganisms - seed dispersal - ecosystem)

1. Traveling by wind and floating on water are from ways of
2. are organisms that decay dead animals and plants.
3. The potato stems extend underground and called
4. are the producers in the marine food web

6. (stomata - liquid - evaporation - chemical)

1. The ability of a piece of iron to rust is from the properties of the matter.
2. Salt can be separated by of salty water.
3. Without in the leaves of plants, gases can't move into or out of the plant.
4. The state of matter that has a definite volume, but it doesn't have a definite shape is state.

7. (phloem - primary consumers - measuring cup - melting)

1. We can change ice into water by using process.
2. is used to determine the volume of an amount of water.
3. The tubes that carry food from leaves to all the plant parts are called
4. Humans can eat producers and

8. (organisms - particles - 0° C - imbalance - 100° C)

1. When a drought occurs in a lake, it causes in ecosystem.
2. All matter is made up of tiny
3. The freezing point of water is
4. All need a source of energy

***(4) Complete the following :**

1. Throwing plastic garbage and waste materials into a river causes water
2. Without in the leaves of plants, gases can't move in or out of the plant.
3. Melting of wax is a change, while burning of wood is a change.
4. When we heat an ice cream, it and becomes liquid.
5. Digestion of food is considered as a change of matter.
6. You can use a to measure the mass of a matter, while you can use a to measure its temperature.
7. An area that provides food, water and shelter to all living organisms which live in it, is known as
8. Helium is not or, so it is considered as a safe gas.
9. The food of plant is a type of which is made in their by photosynthesis process.
10. Sunlight energy converts and into glucose inside the plant's leaves.
11. Bacteria and fungi are considered as organisms, while rabbits are considered as organisms.
12. Particles of matter can slide over each other, so they take the of their containers.
13. We can use gas to fill blimps because it is than air.
14. Sea cannot differentiate between a jellyfish and a piece of in the water.
15. Veins carry blood that contains from the body parts to
16. Changing water from solid state to liquid state by heating called while changing water from gaseous state to liquid state is called
17. When ice is melted it changed from state to state.
18. and take the shape of their containers.
19. In plant's leaves, energy of the Sun changes into energy.
20. Bacteria and are from living organisms that break down dead organisms.
21. Water is the matter in state, while water vapor is the matter in state.

22. We can separate sand from water by process, and salt from water by process.
23. Trees and other plants make food through process.
24. You can separate the mixture of by evaporation.
25. Flowers are the parts of many plants.
26. Bacteria and fungi are examples of
27. Mixing baking soda with vinegar is an example of changes.
28. The plants leaves have tiny openings called
29. Microorganisms are found in water habitats.
30. is a copy that is similar to real thing that shows what it looks like or work like.
31. In plants, are responsible for absorption of water and nutrients from the soil.
32. You can measure the volume of a matter by using
33. When particles of a matter gain thermal energy, their motion become
34. The system transports nutrients and oxygen to cells and organs in human

***(5) Put (√) or (X) :**

1. The mass and properties of oil will change when mixing it with vinegar. ()
2. Particles of all matter are in a continuous motion. ()
3. Xylem helps the plant to get water from the soil. ()
4. Air enters plants through roots. ()
5. All plants need the same way to disperse their seeds. ()
6. If coral reefs are destroyed, many marine food chains will be destroyed. ()
7. Vinegar and frozen vegetables have definite shape. ()
8. Healthy habitats provide living organisms with clean air, healthy food and water. ()
9. When particles of a matter absorb thermal energy, they move slower. ()
10. Recycling nutrients back to the ecosystem is the main function of the consumers. ()
11. From the chemical properties of helium is that it is not flammable. ()
12. We can differentiate between sugar and flour by texture. ()
13. When a solid matter gains thermal energy, it will change into liquid state. ()
14. Plants and humans are similar in the way of getting food. ()
15. Human can eat plants and animals. ()
16. We can use thermometer to measure the temperature of a hot cup of tea. ()
17. If we increase the temperature of some pieces of ice, they will melt. ()
18. Photosynthesis process takes place in the plant roots. ()
19. The first link in any food chain is a consumer ()
20. Phloem transports food materials from the leaves to the other parts of the plant. ()
21. A desert food chain doesn't contain any type of fish. ()
22. A model of an airplane shows us how it flies up into the air. ()
23. Plant's stem has hairs that absorb oxygen gas from the air. ()
24. Birds are secondary consumers, because they eat insects that feed on plants. ()
25. Microorganisms are producers that small fish feed on to get energy. ()
26. The speed of water vapor particles is greater than that of water particles. ()
27. Light is important for plant growth. ()

Science	First Term 2024	Grade 5
28. Water and carbon dioxide are absorbed by plant's roots to help the plant to grow.	()	
29. Light and sound are forms of matter.	()	
30. Liquids don't take the shape of the container that they are placed in.	()	
31. Desalination process is the process of removing salt from water by cooling only.	()	
32. By decreasing the temperature of matter, the speed of its particles will increase.	()	
33. All living organisms need energy.	()	
34. Producers need consumers to live and grow.	()	
35. If coral reefs are destroyed, many marine food chains will be destroyed.	()	
36. Roots fix the plant in the soil.	()	
37. Any food chain starts with bacteria.	()	
38. All matter are made up of tiny particles.	()	
39. A thermometer is used to measure the length of a book.	()	
40. Volume is the space that is taken by a matter.	()	
41. Chlorophyll in plant's root absorbs sunlight.	()	
42. Ice and gold are examples of solid state of matter.	()	
43. Veins carry blood rich in oxygen and nutrients	()	
44. Green plants can grow well in a dark room.	()	
45. Food chains start with decomposers.	()	
46. Liquid particles move faster than solid particles.	()	
47. Ice is considered the solid state of matter	()	
48. Blood moves only in one direction in human's veins or arteries.	()	
49. Chemical changes as rusting of iron can be reversed easily.	()	
50. Food and oxygen provide the body with the energy needed.	()	
51. When the matter gain more energy, it can change to different states	()	
52. There is no interaction between the components of an ecosystem	()	
53. Helium takes the shape and the volume of its container.	()	
54. Desalination process contains filtration process only.	()	
55. Rusting of iron is a physical change	()	

Science	First Term 2024	Grade 5
56.Xylem is important for plants to transfer water from plants roots to leaves.		()
57.Coral reefs bleaching occurs when the temperature of seawater decreases		()
58.Handles of cooking pans are made up of wood or plastic.		()
59.The roof of desert home is similar to rainforest home.		()
60.Food web shows interaction between many living organisms.		()
61.Plants stems absorb oxygen gas from the air		()
62.Iron spoon is attracted to the magnet.		()
63.If we increase the temperature of ice, it will melt.		()
64.Gram is the measuring unit of mass		()
65.Stomata allow gases to move into and out of the plant.		()
66.Coconut seeds disperse by wind.		()
67.The matter can be changed from state to another by changing its temperature.		()
68.Water pollution doesn't affect food chains in the ecosystem.		()
69.Metal rusts due to chemical changes that occur to the material.		()
70.Coral bleaching has a positive impact on coral reefs.		()
71.Cutting wood into pieces changes its mass and color.		()
72.A flower is a reproductive part of the plant.		()

✱(6) Correct the underline :

1	Due to rising of water temperature, coral reefs turn completely into <u>green</u> .	(.....)
2	Tree trunks are <u>climb</u> stems	(.....)
3	There are tiny holes on the <u>stem</u> to allow gases passes into the plant	(.....)
4	Plant's <u>leaves</u> help it to be fixed in the soil.	(.....)
5	Humans can get their food from <u>air</u> and animals	(.....)
6	<u>Oxygen</u> gas is absorbed by plant's leaves to make photosynthesis process.	(.....)
7	Chlorophyll in the plant's <u>roots</u> absorbs energy from the slanted	(.....)
8	Potato plants have <u>runner</u> stems.	(.....)
9	Plants make <u>digestion</u> process to make their own food	(.....)
10	Plants take air through tiny holes on the <u>stem</u> called stomata.	(.....)
11	The <u>stem</u> fixes the plant in the soil.	(.....)
12	Plants use <u>oxygen</u> gas during the photosynthesis process	(.....)
13	<u>Gentle</u> rain causes floods and damages the desert ecosyste	(.....)
14	Plastic is <u>healthy and smooth</u> , so it causes harm to the marine living organisms.	(.....)
15	Human is considered a <u>producer</u>	(.....)
16	Algae are producers in the <u>desert</u> ecosystems	(.....)

17	The roof of a desert home is <u>slanted</u> .	(.....)
18	A thermometer is a tool used to measure the <u>mass</u> of materials	(.....)
19	The roof of a tropical rainforest home is made up of <u>ceramic tiles</u>	(.....)
20	<u>A measuring tape</u> is a tool used to measure the volume of materials	(.....)
21	<u>Kilogram</u> is a measuring tool of length .	(.....)
22	A paperclip has a mass of about <u>1,000</u> g.	(.....)
23	One liter of water has a mass of one <u>gram</u> .	(.....)
24	When particles of matter move quickly, they produce <u>light</u> energy.	(.....)
25	We use <u>steel</u> to make electric wires because it is a good conductor of electricity.	(.....)
26	The handles of cooking pans are made up of <u>copper</u> .	(.....)
27	Freezing water changes it into a <u>liquid</u> state.	(.....)
28	Burning wood is considered a <u>physical</u> change.	(.....)
29	The particles of matter move <u>slower</u> and become further from each other in the evaporation process.	(.....)
30	Vegetable salad is considered a <u>compound</u> .	(.....)
31	Iron is considered a solid because it has a definite <u>color</u> and Shape.	(.....)
32	If the temperature of water increases, it <u>melts</u> and turns into steam.	(.....)
33	When a matter is cooled, its particles move <u>faster</u> .	(.....)

*(7) Matching:

1

A	B
1. Condensation	a. is the change of water from solid state to liquid state
2. Melting	b. is the change of water from gas state to solid state.
3. Freezing	c. is the change of water from gas state to liquid state.
4. Evaporation	d. is the change of water from liquid state to gas state
	e. is the change of water from liquid state to solid state.

1-

2-

3-

4-

5-

2

A	B
1. Veins	a. floating on water.
2. Coconut seeds	b. carry carbon dioxide gas from the body parts to the heart
3. Carbon dioxide	c. is a solid matter.
4. Sand	d. is needed for photosynthesis process.

1-

2-

3-

4-

3

A	B
1. Plants' roots	a. are animals that are hunted by other animals
2. Xylem	b. are organisms that eat plants.
3. Prey	c. transports water rich in nutrients up to the leaves
4. Primary consumers	d. absorb water and nutrients from the soil.

1-

2-

3-

4-

4

A	B
1. Overfishing	a. makes the desert ecosystem get better
2. Gentle rain in the desert	b. leads to floods.
3. Heavy rain in the desert	c. may destroy the marine ecosystem

1-

2-

3-

5

A	B
1. Potato	a. are organisms which eat animals that eat plants.
2. Runners stem	b. plant has climb stems.
3. Vine	c. plant has tuber stem.
4. Secondary consumers	d. extends above the ground.

1-

2-

3-

4-

6

A	B
1. Tomato seeds	a. disperse by animals' digestive systems.
2. Dandelion seeds	b. disperse by floating on water
3. Coconut seeds	c. disperse by wind.
4. Predators	d. disperse by sticking to animals' fur.
	e. are animals that feed on other animals

1-

2-

3-

4-

7

A	B
1. Microorganisms	a. means the increase or decrease in the number of one species in and area.
2. Population change	b. are small plastic pieces that are even Smaller than a grain of rice
3. Microplastics	c. are producers in the marine food web.

1-

2-

3-

8

A	B
1. Coral bleaching	a. can make their own food.
2. Seabirds	b. means the coral turns into white.
3. Microorganisms	c. are primary consumers.
4. Clams	d. dive to search for food.

1-

2-

3-

4-

9

A	B
1. Oxygen	a. Solid state
2. Desk	b. Liquid state
3. Juice	c. Gas state

1-

2-

3-

10

A	B
1. Steel	a. is used to make tires.
2. Rubber	b. is used to make cooking pans
3. Copper	c. is used to make eyeglasses.
4. Glass	d. is used to manufacture screwdrivers

1-

2-

3-

4-

11

A	B
1. Condensation	a. is the change of matter from a solid state to a liquid state
2. Freezing	b. is the change of matter from a gaseous state to a liquid state.
3. Melting	c. is the change of water from a liquid state to a solid state
4. Evaporation	d. is the change of water from a liquid state to a gaseous state

1-

2-

3-

4-

✱ (8) Cross odd word :

1. Oil - Milk - Water - Wood.
2. Roots - Stems - Leaves - Sunlight.
3. Wood - Iron - Oxygen - Gold.
4. Carbon dioxide gas - Sunlight - Water - Oxygen gas.
5. Wood - Iron - Oxygen - Plastic.
6. Pine trees - Apple trees - House flies - Grasses.
7. Carbon dioxide gas - Water - Glucose sugar - Sunlight
8. Heart - Roots - Stems - Leaves
9. Green plant - Shelter - Water - Carbon dioxide gas
10. Arteries - Veins - Stem – Blood
11. Foxes - Lions - Tigers - Frogs
12. Eagle - Hawk - Rabbit - Crocodile
13. Bacteria - Cows - Birds – Snakes
14. Plastic - Iron - Water - Wood
15. Water - Milk - Sand - Oil.
16. Sound - Light - Ice
17. Oil - Milk - Wood - Tea
18. Air - Water vapor - Ice - Carbon dioxide gas
19. Water - Air - Light - Wood

★(9) Give reason:

1. The roof of desert home is made of strong stones.
2. Human needs to eat some animals and plants
3. Ice is turned into water when it is placed in a warm room.
4. Chlorophyll in plant leaves is very important in photosynthesis process.
5. Balloons and blimps filled with helium always rise up in the air.
6. Human can use helium gas safely
7. Iron and wood are solid state of matter.
8. Wood has definite shape and volume.
9. Both melting and freezing processes are considered as physical changes.
10. Xylem vessels are important for the plant.
11. Photosynthesis process is important for plants to survive.
12. Snakes are secondary consumers.
13. Circulatory system has an important role for human to survive
14. When the temperature of ice cubes increases, they will melt.
15. The roof of tropical rainforest home is made of leaves and sticks.
16. Sunlight is important for all living organisms.
17. Oxygen has no definite shape or volume.

✳(10) What happens to ... ?

1. The speed of particles of an ice cube when it is exposed to the Sun.
2. A plant is placed in a dark place for many days.
3. A magnet is put close to an iron nail and a plastic spoon.
4. Plants have no stems.
5. Plant's leaves don't contain chlorophyll.
6. The microorganisms if the seawater becomes warm
7. The temperature of a matter if the speed of its particles decreases.
8. A small lake is exposed to extreme hot climate for several months
9. The speed of the particles of a liquid if it changes into gas.
10. A plant is placed in a dark place for many days.
11. We remove the flowers of a plant.
12. If there is no sunlight reaches the Earth's surface.
13. We put a seed of bean in wet soil for many days.

Model Answer

✱ (1) Write the scientific term:

1. Prey	12. Evaporation	21. Decompose	30. Arteries	39. Solid	51. Copper
2. Water	13. Measuring tape	22. Volume	31. Phloem	40. Solid	52. Steel
3. Roots	14. Top	23. Helium	32. Xylem	41. Gas	53. Glass
4. Melting	15. Overfishing	24. Stomata	33. Sun	42. Liquid	54. Rubber
5. Volume	16. Oxygen	25. Carbon dioxide	34. Photosynthesis	43. Gas	55. Chemical change
6. Globe	17. Electron microscope	26. Decompose	35. Decomposition	44. Measuring tape	56. Condensation
7. Reproduction	18. Liquid	27. Flowers	36. Secondary consumer	45. Particles	57. Matter
8. Producers	19. Photosynthesis	28. Stomata	37. Food web	46. Mass	58. Rust
9. Seabirds	20. Flowers	29. Circulatory system	38. Decompose	47. Melting	59. Flower
10. Solid			39. Solid	48. Freezing	60. Liquid
11. Physical change			40. Solid	49. Model	61. Solid
			41. Gas	50. Volume	

✱ (2) Choose the right answer:

1. C	14. C	27. A	40. A	53. B	66. C
2. C	15. C	28. B	41. A	54. C	67. B
3. B	16. C	29. B	42. C	55. D	68. C
4. C	17. B	30. A	43. C	56. A	69. C
5. B	18. C	31. D	44. B	57. B	70. A
6. C	19. B	32. A	45. B	58. C	71. A
7. B	20. B	33. C	46. A	59. B	72. B
8. B	21. A	34. A	47. C	60. B	73. B
9. B	22. A	35. C	48. D	61. C	74. C
10. B	23. B	36. D	49. C	62. D	75. D
11. C	24. C	37. A	50. C	63. A	76. B
12. C	25. D	38. C	51. D	64. B	
13. A	26. C	39. C	52. D	65. C	

✱ (3) Complete the following sentences using the words below

1. shelter 2. Overfishing 3. predator 4. toxic
1. liquid 2. space 3. Gas - solid 4. particles
1. physical 2. odor 3. rough 4. chemical
1. chemical 2. Overfishing 3. physical 4. shelter
1. seed dispersal 2. decomposer 3. tubers 4. Microorganisms
1. chemical 2. evaporation 3. stomata 4. liquid
1. melting 2. Measuring cup 3. phloem 4. Primary consumers
1. imbalance 2. particle 3. 0°C 4. organisms

***(4) Complete the following :**

1. Pollution	10. Carbon dioxide – water	18. Liquid – gas	27. Chemical
2. Stomata	11. Decomposers – consumer	19. Light – chemical	28. Stomata
3. Physical – chemical	12. Liquid – shape	20. Fungi – decomposer	29. Cold
4. Melts	13. Helium – lighter	21. Liquid – gaseous	30. Model
5. Chemical	14. Turtle – plastic	22. Filtration – evaporation	31. Roots
6. Balance – thermometer	15. Carbon dioxide – heart	23. Photosynthesis	32. Measuring cup
7. Ecosystem	16. Melting – condensation	24. Salty water	33. Faster
8. Flammable – poisonous	17. Solid – liquid	25. Reproductive organism	34. Circulatory
9. Sugar – leaves			

***(5) Put (√) or (X) :**

1. (X)	13. (√)	25. (√)	37. (X)	49. (X)	61. (X)
2. (√)	14. (X)	26. (√)	38. (√)	50. (√)	62. (√)
3. (X)	15. (√)	27. (√)	39. (X)	51. (√)	63. (√)
4. (X)	16. (√)	28. (X)	40. (√)	52. (X)	64. (√)
5. (X)	17. (√)	29. (X)	41. (X)	53. (X)	65. (√)
6. (√)	18. (X)	30. (X)	42. (√)	54. (X)	66. (X)
7. (X)	19. (X)	31. (X)	43. (X)	55. (X)	67. (√)
8. (√)	20. (√)	32. (X)	44. (X)	56. (√)	68. (X)
9. (X)	21. (√)	33. (√)	45. (X)	57. (X)	69. (√)
10. (X)	22. (√)	34. (X)	46. (√)	58. (√)	70. (X)
11. (√)	23. (X)	35. (√)	47. (√)	59. (X)	71. (X)
12. (√)	24. (√)	36. (√)	48. (√)	60. (√)	72. (√)

***(6) Correct the underline:**

1. White	10. Leaves	19. Leaves and sticks	28. Chemical
2. Wood	11. Roots	20. Measuring cup	29. Faster
3. Leaves	12. Carbon dioxide	21. Measuring tape	30. Mixture
4. Roots	13. Heavy	22. 1	31. Volume
5. Plants	14. Toxic and sharp	23. Kilogram	32. Evaporate
6. Carbon dioxide	15. Consumer	24. Thermal	33. Slower
7. Leaves	16. Marine	25. Copper	
8. Tuber	17. Flat	26. Wood / plastic	
9. Photosynthesis	18. Temperature	27. Solid	

***(7) Matching:**

1. c	2. a	3. e	4. d
1. b	2. a	3. d	4. c
1. d	2. c	3. a	4. b
1. c	2. a	3. b	
1. c	2. d	3. b	4. a
1. a	2. c	3. b	4. e
1. c	2. a	3. b	
1. b	2. d	3. a	4. c
1. c	2. a	3. b	
1. d	2. a	3. b	4. c
1. b	2. c	3. a	4. d

★(9) Give reason:

1. To protect the desert home from dust and dirt.
2. To get his needed energy to do his activities.
3. Because the temperature of ice increases, so it will melt and becomes liquid.
4. Because chlorophyll absorbs the energy from sunlight that helps the plant to make photosynthesis process.
5. Because helium is lighter than air.
6. Because helium is not flammable or poisonous.
7. Because it has definite shape and volume.
8. Because it is a solid matter.
9. Because in these processes the matter changes without any change in its structure.
10. Because they transport water and nutrients to the plant's leaves.
11. Because it helps the plant to make its own food.
12. Because they feeds on primary consumer
13. Because It transports oxygen and nutrients through the blood to all the body parts.
14. Because ice cubes will gain thermal energy, so it changes to liquid water
15. To protect the tropical rainforest home from animals getting inside.
16. Because it is absorbed by the plants leaves to make their own food .
17. Because it is a gas matter

★(10) What happens to ... ?

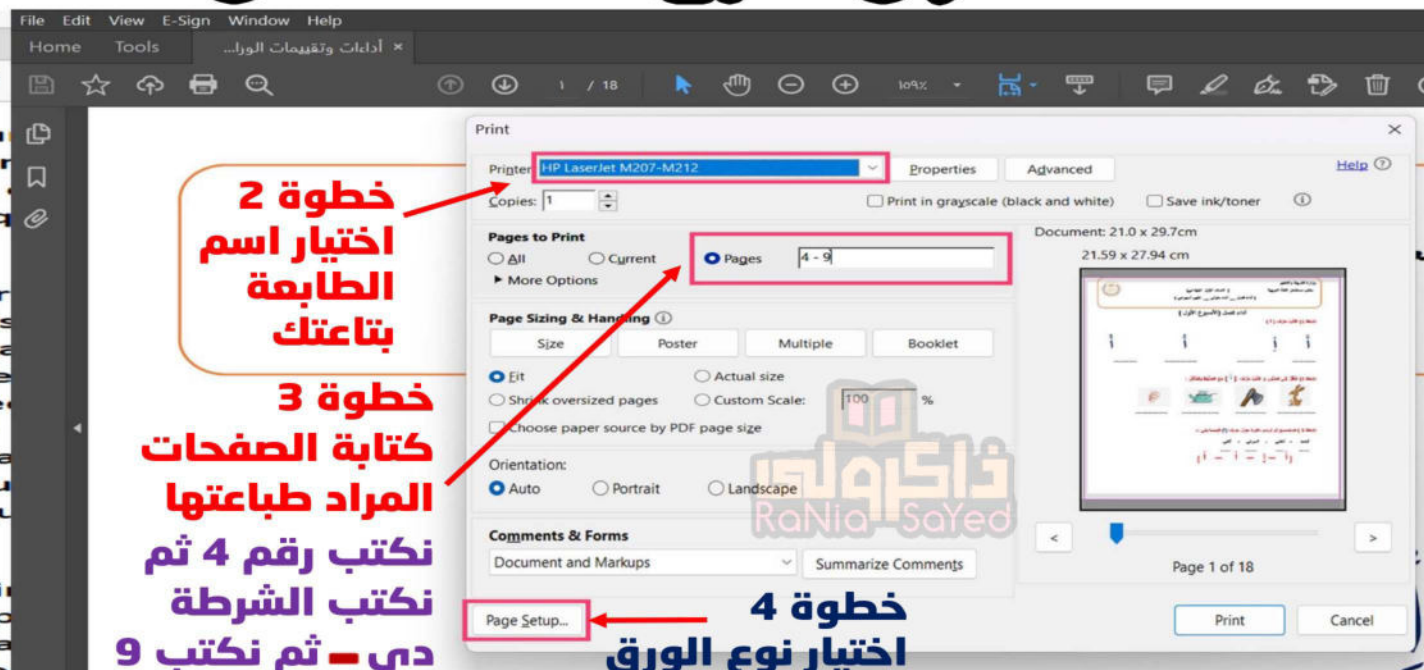
1. It will increase.
2. The plant can't make photosynthesis process and it will die.
3. It will attract the iron nail
4. Water and nutrients will not be carried from the roots to the leaves.
5. The plant can't absorb the energy from sunlight and can't make photosynthesis process.
6. The microorganisms will move away to a cooler water and also fish that feed microorganisms.
7. The temperature of the matter will decrease.
8. The water of the lake decreases due to its evaporation and may completely disappear.
9. It will increase.
10. The plant can't make photosynthesis process and it will die.
11. The plant can't produce seeds that help it to reproduce
12. The plants cannot make their own food by photosynthesis process, so there will be no life on Earth.
13. It will germinate and grow well.

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



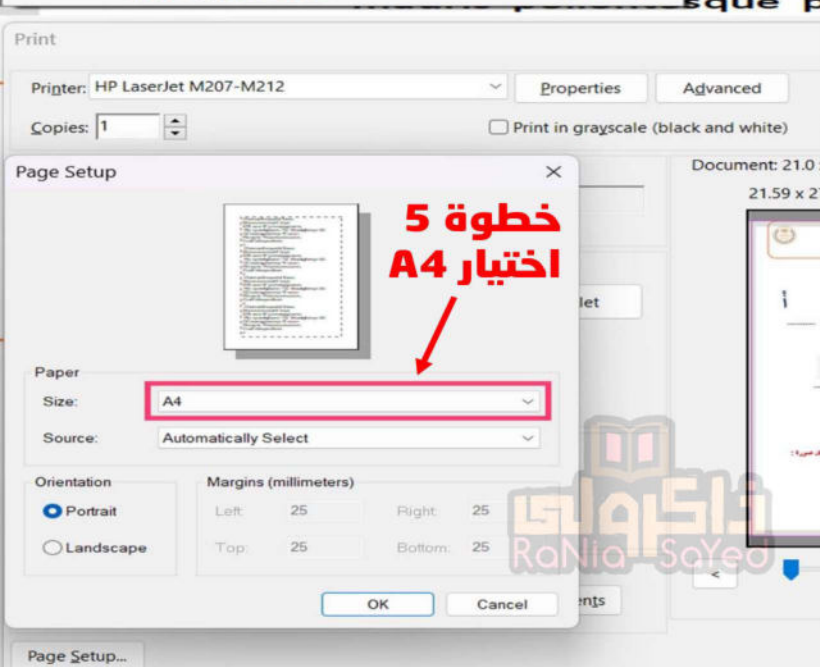
خطوة 1



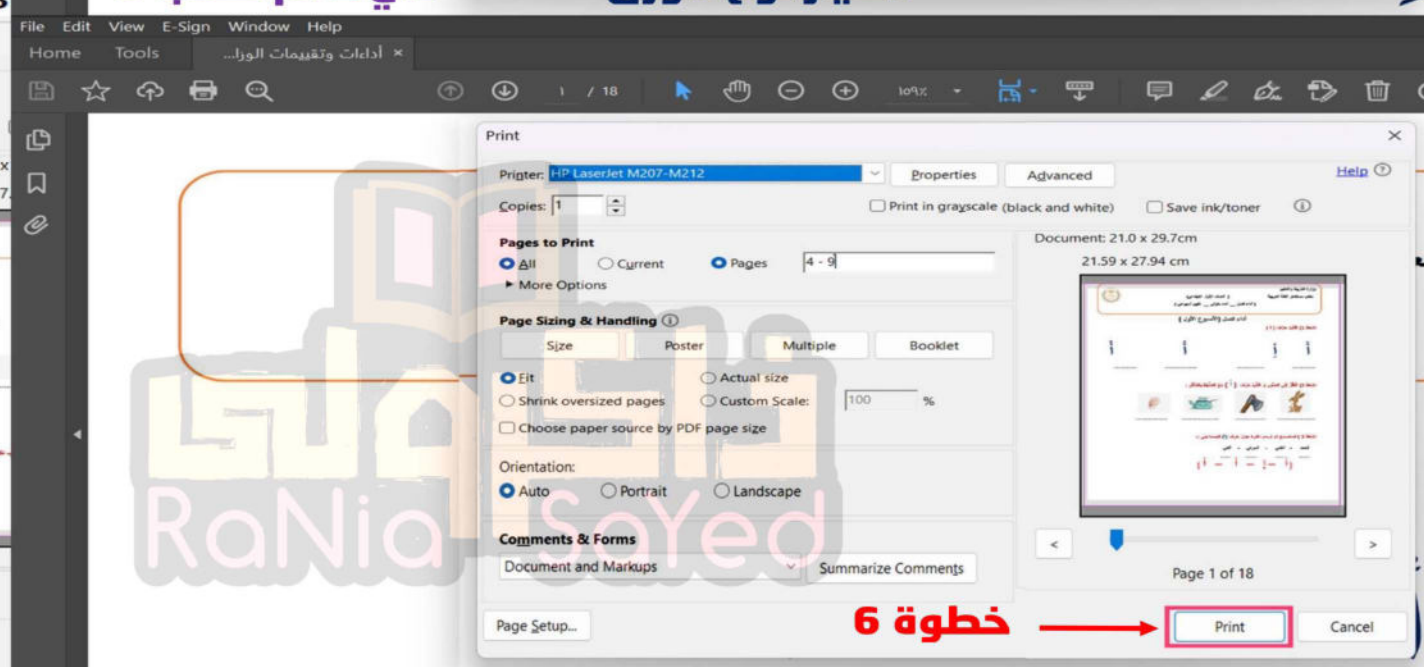
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6